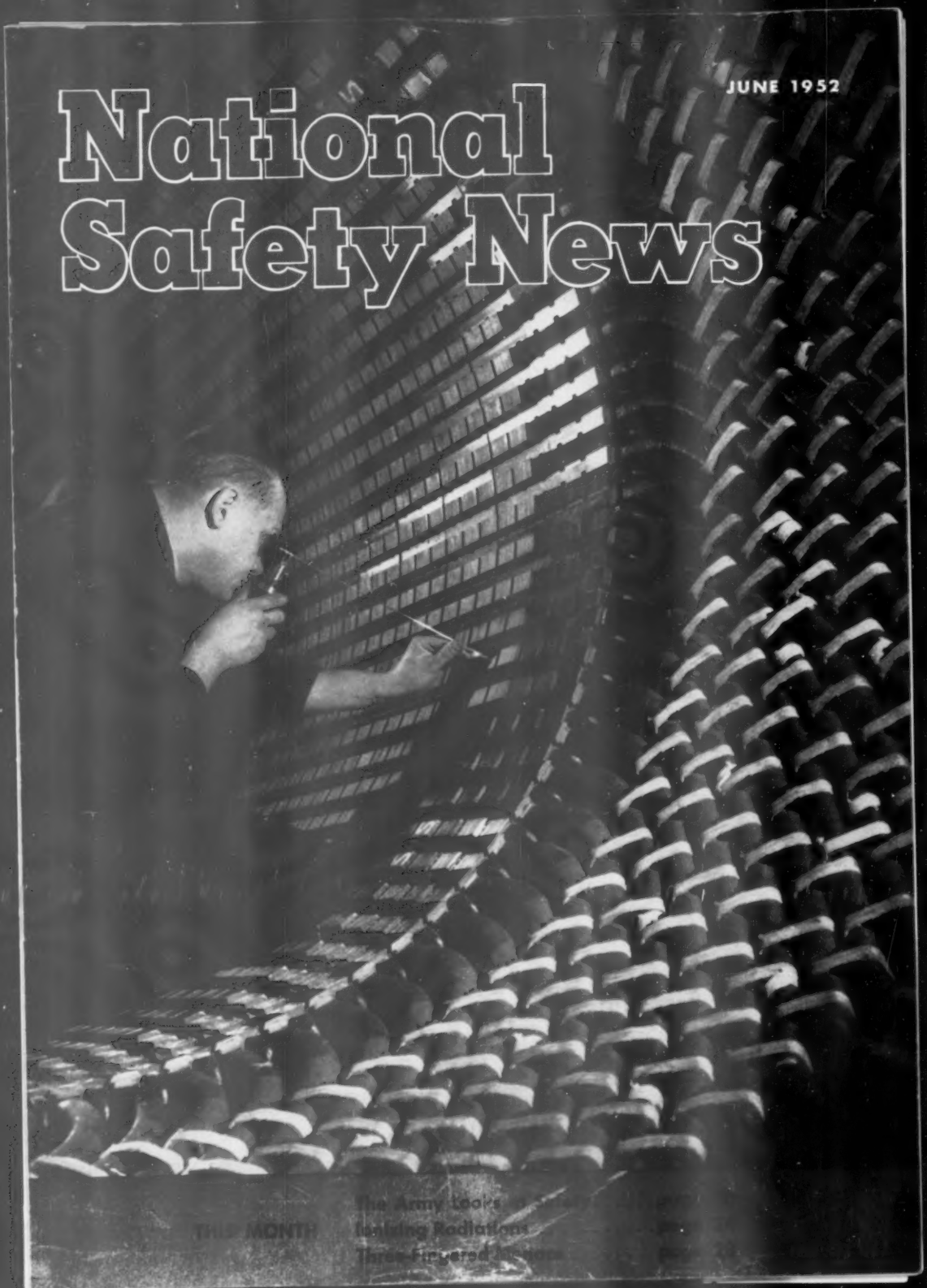
National Safety News

JUNE 1952



THIS MONTH

The Army Looks
Ionizing Radiations
Three-Fingered

Here's an important step in promoting safety in your plant

Almost every day, in some plant or project, a new process or operation is introduced that brings an entirely new set of safety problems, which it is some Safety Director's job to solve. It may happen to you.

Every day, in the M.S.A. Research Laboratory and plant, our people are working to *anticipate* such situations . . . and develop and produce safety equipment to *combat* them.

With the *problem* in your plant, and the *answer* in ours, it's just a matter of getting together. By phoning your nearest M.S.A. office—there's one in all principal cities—you'll find an M.S.A. Man ready and waiting to take this all-important step.

You'll find him a very helpful fellow in time of need. Because his full-time job is safety, he has an intimate knowledge of the hazards of the industries he serves. Because he constantly works with dozens of Safety Directors, he is a rich source of helpful, practical tips on how others have solved specific problems. Because he is backed by the Nation's largest Research Laboratory devoted entirely to Safety, he can bring the latest scientific findings to your door. And because he handles a line of over 2600 items, largely manufactured in M.S.A.'s own plant, he can make completely *unbiased* recommendations, and supply any requirement with an approved *and proven* piece of equipment.

Next time you have a safety problem . . . give the M.S.A. Man a chance to demonstrate his value.

MINE SAFETY APPLIANCES COMPANY
BRADDOCK, THOMAS AND MEADE STS.,
PITTSBURGH 8, PA.

At Your Service: 48 Branch Offices in the United States

MINE SAFETY APPLIANCES CO. OF CANADA LIMITED
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Vancouver, New Glasgow, N.S.

Representatives in Principal Cities in Mexico, Central and South America
Cable Address: "Minsaf" Pittsburgh

MSA
SAFETY EQUIPMENT HEADQUARTERS

Call the M.S.A. man on your every safety problem . . . his job is to help you.

Taxes and Your Telephone

A considerable part of the money you pay for telephone service goes right out in taxes. In fact, the total telephone tax bill last year averaged $2.70 per month for every Bell telephone in the country. It will be even higher this year.

Taxes are necessary . . . you couldn't run a city, state or nation without them. But they do mount up.

BELL TELEPHONE SYSTEM

National SAFETY NEWS

Published monthly by
National Safety Council

JUNE 1952 Vol. 65, No. 6

THE COVER: Medical apparatus helps a field engineer make a precise visual inspection of electrical equipment. Here slot insulation surfaces are being tested with a cystoscope containing a tiny lens and lamp. Such inspections supplement electrical tests. (Photo courtesy Westinghouse Electric Corporation.)

The Army Looks at Safety—*Brig. Gen. G. H. Vogel* 20
Modern Techniques for Fighting Electrical Fires—*W. E. Rossnagel* 22
Ionizing Radiations—*F. A. Van Atta* 24
Now See Here, Ned!—*Bill Andrews* 26
Three-Fingered Menace—*John F. Kilgus, Jr., M.D.* 28
Death to Pests—*Emmet Champion* 30
Congress Previews 33
Portable Power Chain Saws—*Data Sheet D-W 12* 34
Pain Is a Price (Diary of a Safety Engineer)—*Bill Andrews* 38
Treasurer's Statement, NSC 40
Keeping Lead Out of the Air 44
Accidents Fewer in Britain's Industries—*Ray Boyfield* 48
A Big Event in Oak Ridge 56
How Floor Coverings Resist Reagents 66

DEPARTMENTS

Editorial	19	Safety Library	58
Cause and Cure	32	For Distinguished Service	62
Safety Valve	37	Reader's Point of View	68
The Lighter Side	39	Obituary	70
Small Businesses and Associations	42	Personals	87
Green Cross News	50	Safety Posters	100
Coming Events	52	Tools for Your Safety Program	103
Accident Barometer	54	Calendar Contest Winners	117
		New Products	119

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National Safety Council

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This is your stockroom of Lehigh Safety Shoes

You don't have to maintain a big stock of safety shoes to give your personnel, both men and women, effective protection against foot and toe hazards. You can order Lehighs *as needed* – in the correct size and width – in any of 40 different styles – for overnight service from our warehouse. YOU retain control of your foot-safety program with a minimum investment in inventory.

One pair to hundreds picked, packed and shipped same day order received.

Free LINE-POSTER
gives your employees unlimited selection. Write today for copies to post in your plant.

LEHIGH
SAFETY SHOE COMPANY
ALLENTOWN, PA.

Single pairs mailed daily give small plants "big-plant" foot protection.

Y-41 SAFETY GLASSES

...Here to stay

Adjustable nose pads are greatest comfort feature—fit all types of nose contours.

Ful-Vue Temples—placed high to afford uninterrupted side-to-side vision.

You can rely on B&L safety lenses—available in plano or worker's individual prescription.

Bausch & Lomb Y-41 with Acetate Frames

Safety glasses go on a worker's face more readily, and stay there, all day long—when he finds they're really comfortable. And Y-41 is ideal for supervisory personnel, those who work in-and-out of hazard zones. It's especially preferred by women, won't muss the hairdo. Perfect for workers whose skin is sensitive to metal frames. Get complete data on Y-41 from your supplier, or Bausch & Lomb Optical Company, 90306 St. Paul St., Rochester, New York.

BAUSCH & LOMB *Safety Eyewear*

by Watchful Dan The Safety Man

WHY IS AETNA CONCERNED?

DID you see the Aetna ad that appeared recently in Time Magazine?

"He's got his goggles off, boys! Let's get him!" That's the headline. And its uttered by a flock of deadly metal chips flying toward a careless worker's eyes. (See cut.)

Then the ad begins, "Every year approximately 100,000 industrial workers suffer disabling eye injuries."

I know why Aetna's concerned—and so do you. Aetna, and the hundreds of other good casualty companies that serve American industry lost millions last year on workmen's compensation. Accidents are on the increase. So rates are on the increase.

And who's to foot the bill? Your industry, your company.

Bausch & Lomb, like your casualty company, renders a service designed to minimize or eliminate the terrible cost of eye accidents. Listen to the counsel of your casualty company—and consult the Bausch & Lomb supplier in your area for scientific, practical preventative measures. You're never obligated.

-Dan

Air Casualties

It's bad air that does it. But you can step up production by putting a Coppus Blower on the job to keep the air moving — and keep the men cool.

The kind of air a man works in has a lot to do with how much work he can turn out.

In confined places like shipholds or tanks or drums or boilers . . . or wherever the air is stagnant or hot or full of fumes . . . a Coppus Blower is a *must* for getting first-class work out of the men, all the time.

A Coppus Blower or Exhauster helps avoid sickness and lassitude due to bad air . . . and improves morale, too.

Portable and adaptable for special purposes, Coppus Blowers and Exhausters will have dozens of uses around your plant. The "Blue Ribbon" (a blue painted band) is your assurance of quality performance at lowest cost.

COPPUS

BLUE RIBBON BLOWERS

THE BLOWERS THAT PUT MORE MINUTES IN EVERY HOUR

CABLE MANHOLE AND TANK VENTILATORS — BOILER MANHOLE BLOWERS AND EXHAUSTERS — HEAT KILLERS — SHIPHOLD VENTILATORS . . . DESIGNED FOR YOUR INDUSTRY — ENGINEERED FOR YOU

MAIL THIS COUPON To Coppus Engineering Corp., 126 Park Avenue, Worcester 2, Mass. Sales offices in THOMAS' REGISTER. Other "Blue Ribbon" Products in BEST'S SAFETY DIRECTORY.

PLEASE SEND ME INFORMATION ON SUPPLYING FRESH AIR TO MEN WORKING:

- ☐ in tanks, tank cars, drums, etc.
- ☐ in underground cable manholes.
- ☐ in aeroplane fuselages, wings, etc.
- ☐ on coke ovens.
- ☐ on steam-heated rubber processes.
- ☐ on boiler repair jobs.

COOLING:

- ☐ motors, generators, switchboards.
- ☐ wires and sheets.
- ☐ general man cooling.
- ☐ around cracking stills.
- ☐ exhausting welding fumes.
- ☐ stirring up stagnant air wherever men are working or material is drying.
- ☐ drying of walls, sheets, etc., after treated with coating material.

NAME .....

COMPANY .....

ADDRESS .....

CITY .....

(Write here any special ventilating problem you may have.)

Only ANSUL

HAS A COMPLETE LINE OF DRY CHEMICAL FIRE EXTINGUISHING EQUIPMENT

. . . . . Your

BEST PROTECTION

FOR FLAMMABLE LIQUID, GAS AND ELECTRICAL FIRES

MODEL 20-B

MODEL 4-A

MODEL 4-B

HAND PORTABLES

MODEL 20-B

MODEL 30-B

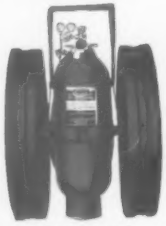
There is an Ansul Extinguisher of the proper size for each of your flammable liquid, gas and electrical fire hazards. With Ansul Equipment the size and nature of the hazard truly dictate the extinguisher model to be provided. And each Ansul Extinguisher Model, regardless of size, is designed for one man operation.

Many years of field experience and development have combined to make Ansul Dry Chemical Fire Extinguishers superior products. These years of field experience under all operating conditions have dictated to Ansul engineers the avenues for attack in their design and developmental work. With Ansul Extinguishers you get . . . watertight construction for dependable operation; sturdy, corrosive-resistant construction for long life and low maintenance costs; quick, positive operation for near-expert results by inexperienced personnel; quick, easy, on-the-spot recharge for continuing fire protection; a complete line of dry chemical fire extinguishing equipment including models approved for operation at –65°F.

For hazards involving flammable metals such as sodium, potassium, magnesium, zinc, etc., Ansul Met-L-X Dry Powder Extinguishers are available in 30, 150 and 300 lb. capacities.

WHEELED PORTABLES

MODEL 150-A



MODEL 350-A

• STATIONARY EXTINGUISHERS AND PIPED SYSTEMS •

MODEL 2000-B

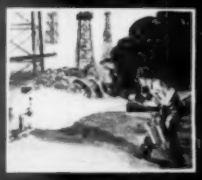
PIPED SYSTEM

TRUCK MOUNTS, TRAILERS AND FIRE TRUCKS

MODEL J1-340

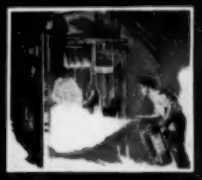
Ansul Dry Chemical Fire Extinguishers are listed and approved by the Underwriters' Laboratories, Inc. and Factory Mutual Laboratories for flammable liquid (Class B) and electrical (Class C) fires. Certain models carry U. S. Coast Guard approval for marine fire protection. They are also recommended by insurance companies for control of surface fires in textile lint and paper dusts. Thousands of Ansul Extinguishers are used by petroleum producers, pipeline companies and public utilities for protection against fires in propane, butane, natural gas, illuminating gas, etc.

TEXTILE LINT FIRES



FLAMMABLE LIQUID FIRES

GAS FIRES



ELECTRICAL FIRES

Before you buy additional fire protection equipment, get complete information on Ansul Equipment. Send for File No. 216. Besides our latest catalog this file contains other helpful material published by Ansul Chemical Company as a special service to our friends and customers.

ANSUL

CHEMICAL COMPANY

FIRE EXTINGUISHER DIVISION

MARINETTE • WISCONSIN

IN PRINCIPAL CITIES IN THE U. S. A., CANADA AND OTHER COUNTRIES

FATAL SHIPYARD FIRE $150,000 LOSS, 1 DEAD

A general alarm fire which swept through the boatyard owned by [redacted] at East Norwalk, Conn. on April 10, caused the death of [redacted] and sent four Norwalk firemen to the Norwalk hospital suffering from severe burns received while fighting the fire.

The fire is believed to have started when a boat-owner, working in the bilge of his boat and using a hammer and chisel on an exhaust pipe, struck a spark which ignited fumes in the compartment.

Avoid $150,000 sparks in your plant
— USE AMPCO SAFETY TOOLS

How to choose Safety Tools

For tools subjected to impact and/or torque — specify tools of Ampco Metal.

For tools with cutting edges and gripping teeth — specify Ampco beryllium-copper tools.

For jobs around acetylene and certain other gases — specify Ampco Monel® tools.

®Trademark International Nickel Co.

A few dollars invested in non-sparking Ampco Safety Tools could prevent hundreds of costly fires and explosions which strike unexpectedly every day. That's why Factory Mutual Laboratories and other safety authorities approve and recommend Ampco Safety Tools for use in hazardous locations.

Equip your workmen with Ampco Safety Tools. You earn lower insurance rates, improve workers' morale for greater efficiency — and protect your plant against paralyzing disaster. Send for free Safety Tool Catalog.

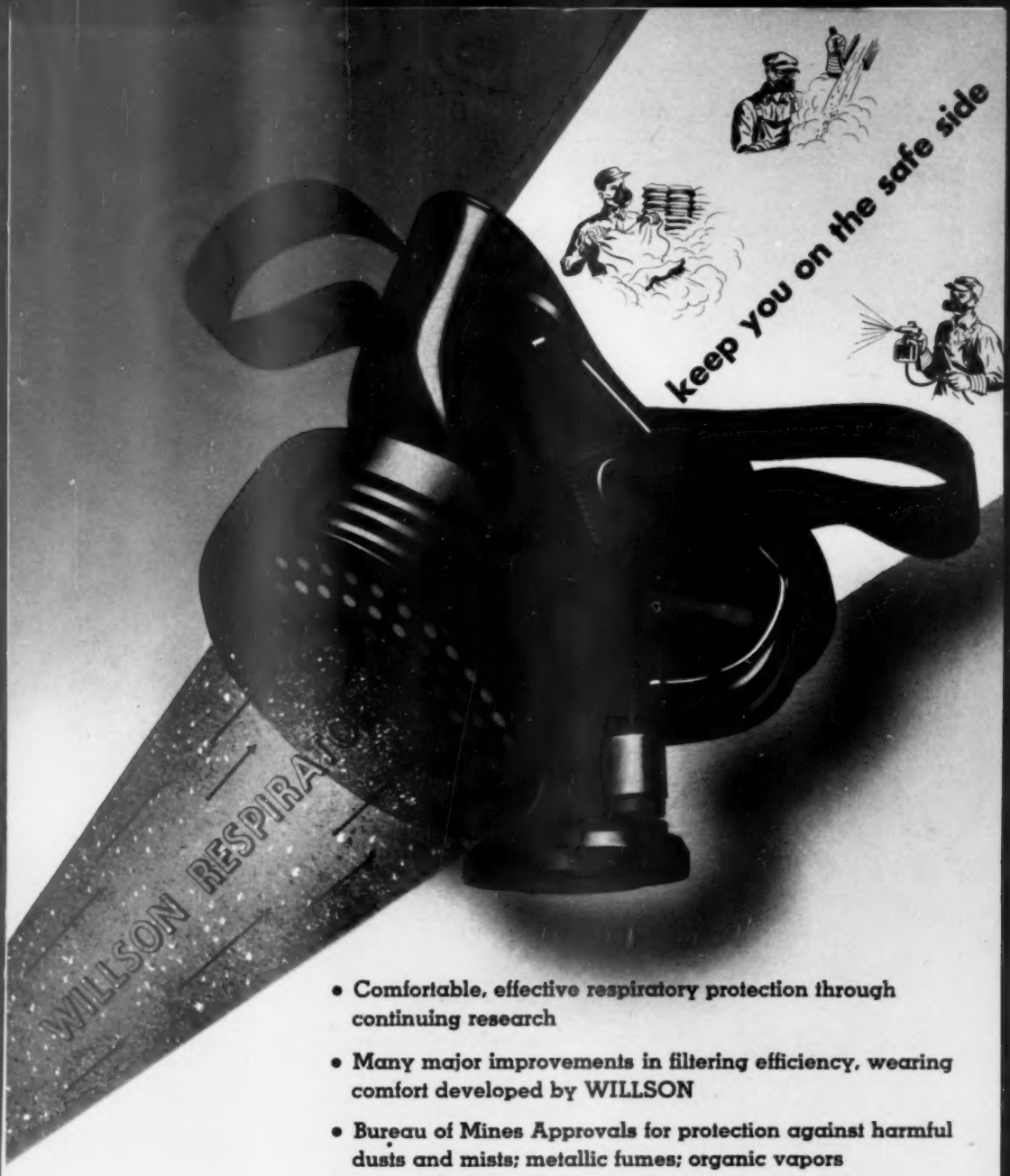
"AMPCO-ize to Economize"

Ampco Metal, Inc.

Dept. NS-6, Milwaukee 15, Wisconsin

T-5

West of the Rockies, it's the Ampco Burbank Plant, Burbank, California
In Canada — Safety Supply Company, Toronto, Ontario



- Comfortable, effective respiratory protection through continuing research
- Many major improvements in filtering efficiency, wearing comfort developed by WILLSON
- Bureau of Mines Approvals for protection against harmful dusts and mists; metallic fumes; organic vapors
- Largest line of respirators for industry, farm and home use

WILLSON®

Dependable Products Since 1870

For all respiratory hazards—

WILLSON Approved Safety Equipment

Universal Gas Mask Style WUG

With automatic timer showing useful remaining life of canister, the Willson Universal is available in a Standard and Fire Fighting (smoke protection) model. Bureau of Mines Approval Nos. 1443 and 1445.

Chemical Cartridge Respirator No. 831

New molded rubber facepiece; a flexible rolled edge for greater comfort, dual, self-contained cartridges; protects against common industrial gases and vapors in low concentrations. Bureau of Mines Approval No. 2302.

You'll find in Willson's complete line of respirators and gas masks one or more that provide the necessary protection against toxic and nuisance dusts, mists, fumes, vapors and gases.

They provide also the comfort and ease of breathing that assures low fatigue—and worker cooperation in wearing safety equipment.

Lightweight Respirator No. 46

For protection against all dusts. Is easy to wear and features inexpensive throw-away filters. Bureau of Mines Approval No. 2152.

Mist and Dust Respirator No. 750D

Double, oversize filtering areas provide exceptionally easy breathing. Inexpensive throw-away filters are easily replaced. Bureau of Mines Approval No. 2151.

Metal Fumes, Mists, All Dusts No. 880

Same facepiece as described for No. 831. Comfortable under welding helmet. Dual filters are quickly replaced. Bureau of Mines Approval No. 2149.

Abrasive Blasting Helmet No. 51

Lightweight, hood type, with fitting for air line ventilation. Provides comfort and safety over long periods of time. Bureau of Mines Approval No. 1923.

*T.M. Reg. U.S. Pat. Off.

More Than 300 Safety Devices Carry This Trademark

WILLSON®

Sold the World over

WILLSON PRODUCTS, INC.
205 Washington St., Reading, Pa.

Call your WILLSON distributor for complete Eye and Respiratory Safety Service

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MIAMI, FLA.—Cameron & Barkley Co.
MILWAUKEE, WIS.—
Protective Equipment, Inc.
MUSKEGON, MICH.—Factory Supply Co.
NEWBURGH, N. Y.—W. L. Smith Co.
NEW ORLEANS, LA.—
Woodward, Wight & Co., Ltd.
NEW YORK, N. Y.—W. S. Wilson Corp.
OKLAHOMA CITY, OKLA.—
Hart Industrial Supply Co.
OMAHA, NEBR.—
Interstate Machinery & Supply Co.
ORLANDO, FLA.—Cameron & Barkley Co.
PHILADELPHIA, PA.—
Industrial Products Co.
PITTSBURGH, PA.—Safety First Supply Co.
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PROVIDENCE, R. I.—James E. Tierney
RICHMOND, VA.—Smith-Courtney Co.
ST. LOUIS, MO.—Sligo, Incorporated
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TULSA, OKLA.—
Krisman Industrial Supply Co.

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SAFETY SUPPLY COMPANY

Toronto
Montreal
Windsor
Kirkland Lake
Winnipeg
Edmonton
Vancouver
Halifax

RIGHT IN YOUR OWN BACK YARD....
BY WEST
TO HEAR DIEHARD TELL IT, NO INSECTICIDE COULD DO THE JOB IN HIS PLANT··· UNTIL··· YOU GUESSED IT··· HE TRIED "DOUBLE PENETRATION!"
SNA-FOOD KOMPANY
HEY, BOSS, HAVEN'T FOUND A TRACE OF WILD LIFE SINCE LAST WEEKS FOGGING WITH VAPOSECTOR!
H'MM! I'M BUGS, IF VAPOSECTOR DOESN'T DO THE TRICK!
WHY TEAR UP THE FLOORBOARDS? I CAN'T EVEN HEAR A FADING HEART-BEAT!
HERE'S THE COST SHEET, BOSS-12,000 CUBIC FT. HERE··· SO IT ONLY COST US A BUCK TO FOG THIS WHOLE DEPARTMENT WITH OUR WEST ATOMIZERS!
REMEMBER THE FIRST VAPOSECTOR DEMONSTRATION? IT POSITIVELY RAINED INSECTS!
I WAS ITCHING TO TELL YOU THAT!
THEM'S NOT BUGS··· THEY'RE POPPY SEEDS FROM SOMEBODY'S LUNCH-BOX
NO SMELL, NO STAIN, NO AFTERTASTE··· VAPOSECTOR QUALIFIES HERE, CHIEF!

DIEHARD'S CASE ISN'T SO UNUSUAL AFTER ALL! In all types of industry West representatives hear comments like "our situation is a special one" . . . "an insecticide is bound to impair the quality of our product" . . . and – stranger still – "we don't have any insect problem here!"

VAPOSECTOR was formulated for the realist who *has* an insect problem and wants to get rid of it – fast! It's fully three times as concentrated as the standard Grade AA spray . . . yet there's no danger of contamination or odor when used according to directions. Vaposector controls insects by "double penetration". When used with West spraying equipment, it becomes a "dry fog" that *penetrates* the most remote crevice . . . then *penetrates* the insect's outer covering for a permanent kill. There's no place to hide. No time to escape. A Vaposector demonstration has often revealed dead insects in numbers never thought possible – simply because they live and multiply in unseen cracks and crevices.

VAPOSECTOR gives more positive control value per gallon than any competitive product. It breaks down into such minute droplets when atomized with specially-designed West equipment, that only one ounce is needed to control flying insects in 1000 cubic feet . . . only two ounces for crawling insects. Compare it with an ordinary mill spray and you'll find Vaposector is over *four times as economical in use!* West can supply Vaposector as well as special mill sprays and fumigants . . . residual and contact insecticides . . . spraying equipment – a *complete insect control program* tailored to your exact needs!

WEST DISINFECTING Company

42-16 West Street
Long Island City 1, N. Y.

ASK FOR FURTHER INFORMATION ON HOW TO CONTROL INSECTS BY "DOUBLE-PENETRATION"

Dept. 7

☐ Please send Vaposector booklet.

Please send information on specially-designed permanent ☐, portable ☐, hand spraying ☐ equipment

Name _____ Title _____

Company _____

Address _____

City _____ Zone _____ State _____

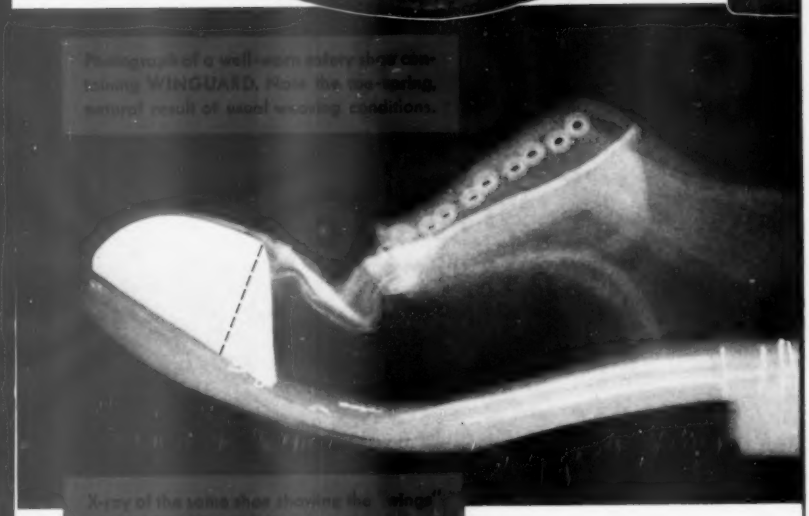
In *TOE SAFETY...* it's the INSIDE

We concede that no safety box toe can be made regardless of its basic steel, its gauge, or its profile that can not be collapsed by unusually extreme striking force. As we see it, the job of a steel safety box toe is to reduce as far as possible the potential of the accident — to be so protective as to cause an important percentage of amputations to become fractures, and fracture cases to become abrasions, and in innumerable instances of lesser accident save the wearer from as much as a bruise. Since the best steels are already in use and since increased gauge means wearer discomfort from weight, only architectural improvement can make steel toes safer. Toes that resist back-tipping — that buttress the toe dome under extreme toe-spring — that present greater bearing surface against the shoe upper in resisting lateral spreading — may well mean the difference between minor and serious injury to the wearer. Such toes are available to your safety shoe supplier. They are known as WINGUARDS.

400
FOR SAFETY DRESS SHOES

500
FOR SAFETY WORK SHOES

story that counts



Photograph of a well-worn safety shoe containing WINGUARD. Note the toe-spring, natural result of steel-wearing conditions.

X-ray of the same shoe showing the "wings" of WINGUARD still fully supporting the toe dome. Dotted line indicates the back edge position of non-wing types after toe-spring has forced the dome area to overhang the toe members.

WINGUARDS

safest steel box toes

SAFETY SHOE MANUFACTURERS LICENSED TO USE WINGUARD STEEL SAFETY BOX TOES

as of Jan. 1, 1952

UNITED STATES

Allen-Squire Co.
Spencer, Mass.

G. H. Bass & Co.
Wilton, Maine

Belleville Shoe Mfg. Co.
Belleville, Illinois

Curtis Shoe Co., Inc.
Marlboro, Mass.

Charles A. Eaton Co.
Brockton, Mass.

Endicott Johnson Corp.
Endicott, N. Y.

General Shoe Corp.
Nashville, Tenn.

Georgia Shoe Mfg. Co.
Buford, Georgia

Joseph M. Herman Shoe Co.
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Hill Bros. Co.
Hudson, Mass.

Holland-Racine Shoes, Inc.
Holland, Michigan

International Shoe Co.
St. Louis, Missouri
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H. Childs & Co., Inc.
Pittsburgh, Penn.

Knapp Bros. Shoe Mfg. Corp.
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Lewcraft Shoe Co.
Sheboygan, Wisconsin

J. F. McElwain Co.
Nashua, N. H.

Milwaukee Shoe Co.
Milwaukee, Wisconsin

Mosshack Shoe Co.
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Wolverine Shoe & Tanning Corp.
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CANADA

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St. Hyacinthe, P.Q.

Daoust, Lalonde, Inc.
Montreal, P. Q.

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Grab Shoe Co., Ltd.
Kitchener, Ontario

Hydro City Shoe Mfrs. Ltd.
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The T. Sisman Shoe Co., Ltd.
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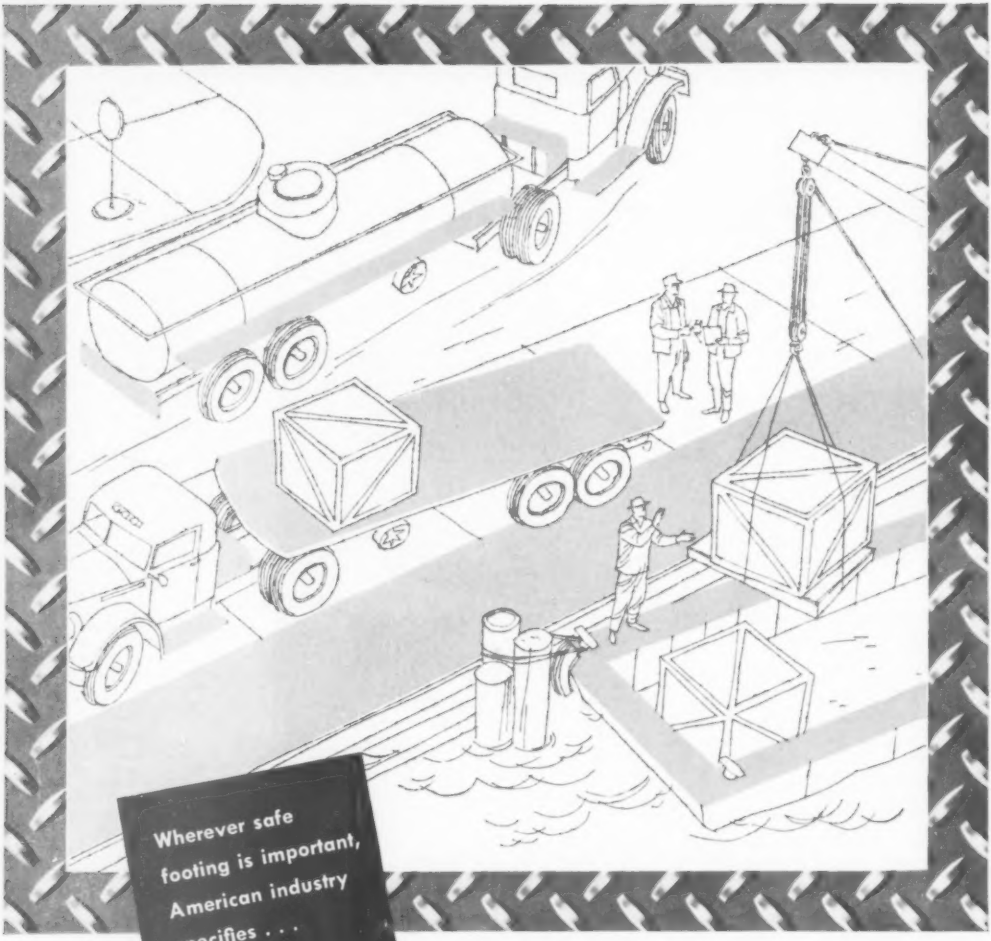

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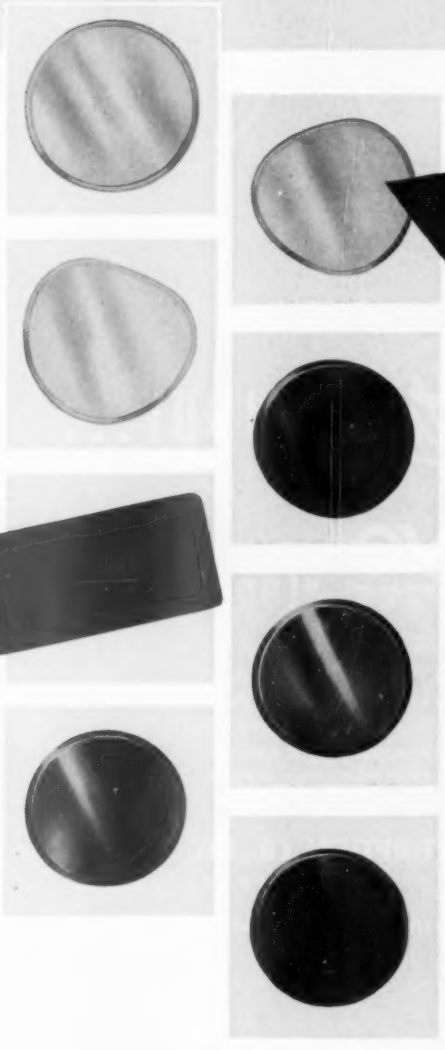

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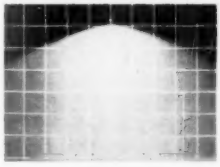

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If you will write, we will be glad to send literature giving complete information on the new Grinnell Automatic ProtectoSpray.

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BoL Tan® leather insole Sweat-Resistant

Examine closely the two safety-shoe insoles that are illustrated here. They were cut from a single pair of shoes worn by a foundry worker for seven months.

The insole shown on the left is a BoL Tan leather Insole. The other insole is an ordinary leather insole, the standard of the work shoe industry.

The condition of the two insoles reveals the remarkable advantage of the BoL Tan leather insole and its sweat-resistant value.

Note BoL Tan Leather Insole still soft and pliable, shown by cut section lifted for inspection.

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Make sure your workers' feet are protected by HY-TEST Safety Shoes . . . for comfort that pays off in more productive man-hours. And, save your workers the money they'd otherwise have to spend for extra pairs to take the place of the longer wear BoL Tan leather insoles provide in HY-TEST SAFETY SHOES . . . AT NO EXTRA COST.

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NATIONAL
SAFETY NEWS

JUNE 1952

Thousands of Safety Men

HUNDREDS OF THOUSANDS of new safety men will graduate from America's schools and colleges this month.

Before you challenge that statement, let me make it clear that I am *not* talking about the slim group of 1952 graduates who have taken any formal courses in safety engineering. I am not talking, for the most part, about men and women who will ever hold jobs whose titles include the words "safety" or "accident prevention."

The enormous majority of these young people will go into office work, industrial jobs, or professions. They will, according to their abilities and opportunities, find places as workers, supervisors, and—in time—high executives.

Included in the Class of 1952 are tomorrow's safety directors. But also included are those who will, someday, be the bosses of safety directors and those who will be the people the safety directors try to protect.

We all have, of course, an immediate responsibility to indoctrinate the Class of 1952 with safety knowledge, so that its members can work in our companies with a minimum of hazard. But we must do much, much more for these young people, both in their interest and in the interest of our companies.

The machinist apprentice, the young engineer, the new girl on the assembly line, the junior timekeeper—these and all the other June graduates you will encounter in the months ahead—they are the stuff of which tomorrow's leadership will be built. Their first contacts with industrial safety work may well color their lifelong viewpoint toward this work. In a year, or five, or ten, the youth who is in industry's kindergarten today may be the key worker in terms of influence, may be the supervisor of a large crew, may be an engineer with real authority. In 15 years or 20, one of these young people may be the general manager or the president of the company, with full power to make or break the effectiveness of the safety program you or your successor is conducting.

It seems to me a very simple conclusion from these facts that we must not only give the necessary safety instruction—we must explain *why* we give it. We must make it clear to our new people that safety procedures are not an arbitrarily arrived at technique for making life difficult for employees, but a logically conceived method of protecting the best interests of the worker and the company.

We must, also, make it clear that we welcome from these young people any ideas they may have in regard to safety. Even if we are as wise as we like to think we are, we all know that we don't know it all. We need to know what these young people can tell us—but it is even more important to make them understand from the start that safety is their business, that it will continue to be their business in whatever capacity they ultimately will serve the company.

So, let's greet the Class of 1952 as it enters industry with a warmth and sympathy that reflects our understanding of their future roles as fighters against the waste and pain of accidents.

Ned H. Dearborn

the ARMY looks at SAFETY

By BRIG. GEN. G. H. VOGEL, U.S.A.

Safety engineering has aided survival in combat. Now it is being applied to the Army's vast industrial plants.

General Vogel

BEFORE beginning the development of our theme, perhaps I should define what safety engineering means to me. At its best, safety engineering is the constant evaluation of a workable compromise between the needs of safety and the needs of getting a job done. The art of observation, the gathering of statistical information, the coalition of this information, and the instigation of some positive corrective action is about the limit of the scope of a safety engineering program. Within the limits of this basic compromise, safety engineering must teach, train, publicize, design, construct, operate, supervise, enforce and preach safety everlastingly — 24 hours a day, every day of the year.

BRIG. GEN. G. H. VOGEL *is Commanding Officer, Atlanta General Depot, U. S. Army. This article has been condensed from an address before the Thirteenth Annual Southern Safety Conference, Atlanta, Ga.*

Storage and warehousing in the Medical Supply Section. Mechanized equipment for handling materials has proved its value.

Precision buffing in the Tire Rebuild Shop.

Lathe section, machinists' course. Functional use of color has been applied in the shop.

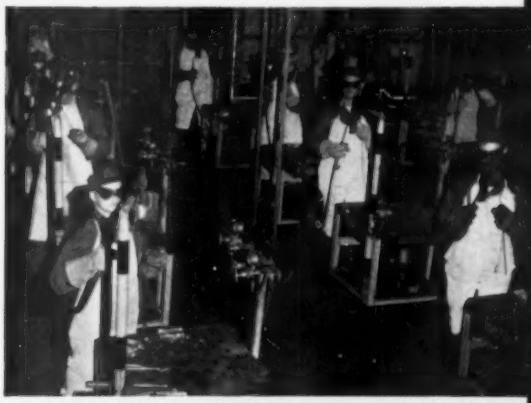
Oxy-acetylene welding class at the Ordnance Automotive School, Atlanta General Depot.

With this over-all concept in mind, I would like to channel my remarks into three general areas: first, the application of safety engineering to combat: second, other special applications of safety engineering principles within the military services, and third, the application of safety engineering in a large industrial plant, the Atlanta General Depot.

In the field of combat safety, your military services have demonstrated an amazing mastery of the art of safety engineering. The very survival of an individual on the battlefield depends on a most complete understanding of and training in the principles of safety.

Each minute of military training is focused toward one end—how to survive in combat and at the same time create destruction which is the production of war. By way of example, the soldier is initially taught how to operate safely his dangerous equipment. But at the same time he is taught how to

—*To page 72*



Tool grinding at the Ordnance Automotive School. Eye protection must be worn.

Fitting an employee with safety shoes. Some 4,000 employees are now wearing them.

A water spray system in action protecting transformers at Seward Station of Pennsylvania Electric Company, Johnstown, Pa.

Modern Techniques for Fighting Electrical Fires

By W. E. ROSSNAGEL

FIRES are divided into three classes, namely, Class A, Class B and Class C. Of primary interest to electric power companies are Class C fires, those in electrical apparatus. Notwithstanding the instructions to "kill" all equipment involved in the fire or adjacent to it, it is important that nonconductive extinguishing agents be used.

Should the fire be in the winding of a motor or other insulation, we would treat it like a Class A fire and extinguish it by the cooling method. If it is an oil circuit breaker which is involved, we would use a smothering or cooling agent, for it would be similar to a Class B fire.

Carbon tetrachloride extinguishes by smothering and to a very limited degree by cooling. CO_2 and dry chemical extinguishers will smother fire but have practically no cooling effect. Water fog is an effective cooling medium and may have some blanketing effect.

From a distance, most overhead electric wires look alike and it may be difficult to distinguish a high voltage wire from a telephone wire. We may, however, get a good idea of the voltage by noting the position of the wires on the wooden poles which line our streets.

The top cross-arm, and possibly the top two cross-arms, are used for high voltage primary feeders. If there are two primary cross-arms, the upper one is used for "express" or long distance feeders, while the second arm is for "local" feeders. On these arms are six pins with relatively large insulators. On one side of the pole (frequently the side toward the buildings) are the three power wires known re-

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W. E. ROSSNAGEL *is Safety Engineer, Consolidated Edison Company of New York, Inc. This article has been adapted from a lecture presented at Firemen's Training Institute, White Plains, New York.*

spectively as Phase A, Phase B and Phase C. On the other side of the pole, usually on a white insulator, is the neutral wire which normally is at "ground" potential, and one or two series street lighting wires. The primary wires are frequently at 4,100 volts between phases, or 2,300 volts from any wire to ground. The street lighting wires are normally "dead" in the daytime, but at night the potential to ground may reach as high as 8,000 volts depending upon the location and on the number of lights on the circuit.

On the cross-arm below, also with 6 insulators, are the secondary wires, the voltage of which is 120 or 240. On the side of the pole will be found a rack with three insulators, one above the other. These are for 120-240 volt secondary services leading to houses or other buildings.

Lower on the pole may be one or more longer cross-arms with ten insulators each, for carrying telephone, telegraph and other communication wires with harmless low voltages.

Below this cross-arm, on certain streets of some cities, there may be a short cross-arm with two or four insulators supporting large size wires. These are the 550 volt direct current feeders for trolley wires.

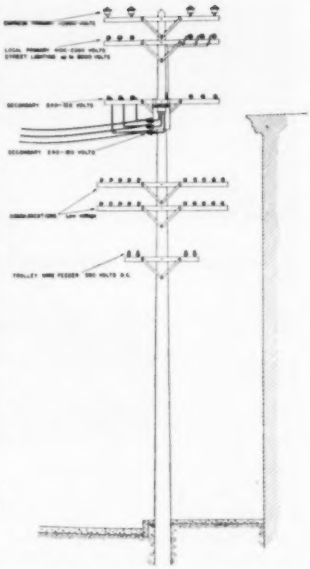
Going cross-country are many high tension or "high" lines which furnish power from the generating stations to substations, or from substation to substation. These are usually on high galvanized steel towers with insulators about 6½ feet long. The voltage on these lines is usually 138,000 or 220,000.

In the transformer vaults in most industrial plants, the voltage to ground is frequently 2300, but in the case of large plants, the power may be supplied at 13,800 volts.

Trolley cars usually operate at 550 volts d.c. Some electrified railroads operate at 11,000 volts.

In some lighting company substations the potential may be 2300, 13,800 or 138,000 volts.

Should you be called upon to extinguish an ordinary (Class A) fire in an industrial plant, there



Line pole showing various types of circuits carried.

Carbon dioxide extinguishers are safe and effective for fires around electric equipment. There is no damage to delicate apparatus and no residue.

is relatively little hazard of shock from directing the extinguishing agent onto live electrical conductors, except in the transformer vaults. The most hazardous extinguishing agent is a stream of foam from an extinguisher or hose.

Some fire chiefs may insist that *all* the power in the plant be shut off at once. This is not to be recommended, for the shutting off of all power may extinguish vitally important lights, stop elevators between floors, and even in some instances stop the fire pumps. There are cases on record where relatively minor fires were allowed to spread and destroy buildings because of water failure resulting from unnecessary shutting down of the fire pumps.

When fighting a fire in a factory or house, there should be no danger if the hose stream is accidentally directed onto primary wires on poles in front of the building. But when climbing a ladder, watch that you do not

—To page 79

IONIZING RADIATIONS

By F. A. VAN ATTA, Ph.D.

These radiations are entering a growing field of usefulness as measures for controlling their hazards are improved

THE use of ionizing radiations is becoming an essential process in industry as well as in many of the sciences. The processes in which they are used are even more varied than the sources of radiation, which might be a radon needle not much larger than a common sewing machine needle or a high-voltage x-ray machine weighing several thousand pounds and requiring a separate building to accommodate the machine and its accessories.

The ionizing radiation in use may be gamma ray from radium, alpha ray from polonium, x-ray from a tube or, more recently, alpha beta or gamma radiation or neutrons from artificially produced sources. In addition to the intended effects, all of these types of radiation are capable of producing injury to the body. The high potential x-ray or the gamma ray is regularly used in medical practice to destroy tumor tissue by producing ionization in it. Misused, these or the other ionizing radiations can destroy normal tissue by precisely the same process of ionization. They produce their destruction rapidly and the process is painless until the damage is done. It is probably because of this insidious nature of the damage that the first x-ray burn was reported within a year after the discovery of the x-ray.

Of the ionizing radiations, the x-rays, gamma rays, and cosmic radiation are electromagnetic phenomena similar to visible light except that they are of higher frequency and, consequently, more penetrating. The other types are all moving charged particles. Whatever the particular radiation the injuries produced are qualitatively the same. There are quantitative differences due to the differences in intensity and penetration. A low voltage, crystallographic x-ray tube, for example, could produce a radio tumor in the skin but not in any deeper tissues because it will not penetrate any deeper. The radio tumor produced

F. A. Van Atta is Director of Industrial Hygiene, Industrial Department, National Safety Council.

Persons entering Oak Ridge National Laboratory picking up their meters from racks in the portal building. Meters are read at the close of each shift and cases of appreciable radiation exposure are investigated immediately.

Technicians checking laundered clothing at Oak Ridge National Laboratory. All protective clothing is washed at the laboratory. Special chemicals are sometimes used to remove radioisotopes.

by the x-radiation from a high-powered metallographic tube or by the gamma radiation from radium might be in the bone of the hip if the penetration of the particular radiation happened to be such that the maximum effect was produced at that particular depth in the tissue. The physical mechanism of the production of the two tumors would be identical except for the difference in depth in the body to which the two types of radiation would penetrate.

Alpha radiation produces a great deal of ionization over its very small depth of penetration (30 to 50 microns in tissue) so that it is potentially extremely destructive. Since all of the alpha radiation is absorbed in the horny layer of the skin it is not of any particular importance as a source of external radiation injury. It does become of real practical importance when the dust of a radioactive material which gives off alpha radiation is taken into the body and fixed in the tissue where it becomes a source of internal radiation. This occurred in the now famous cases of the radium dial painters who ingested radium by pointing the tips of their brushes between their lips. It has also happened from the inhalation of a radioactive dust.

Radium, being similar to calcium in its chemical reactions, is fixed in the bones and is eliminated at only a very slow rate. This is usually expressed by saying that its biological half life is quite long. Half of any amount of radium fixed in the bones, for example, will be eliminated in 45 years, so that its biological half life is 45 years.

Beta radiation is important both because of the possibility of radiation burns from an external source and because of damage from internal radiation from absorbed materials. The beta particle carries only half the charge of the alpha so that it produces much less ionization along its path but its path is very much longer. The penetration in tissue is apt

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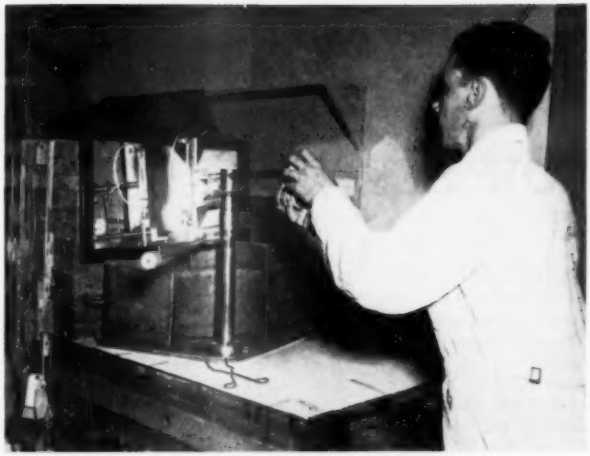


Operating chemist at Oak Ridge uses special remotely operated device for measuring out small portions of radioactive products in solution. Bulk of sample is shielded in a solid lead block while operator observes small sample through mirror. (Photo by U. S. Army Signal Corps.)

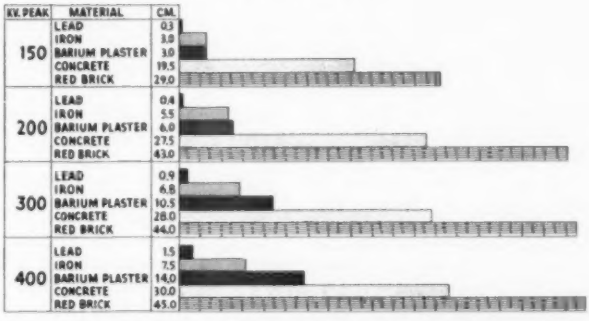


Figure 1. Lead equivalents of building materials in affording radiation protection. Thickness of each material is given in centimeters. (From Quimby and Pool, "Protection in Radiology and Exhibit." Radiology 41:272.)

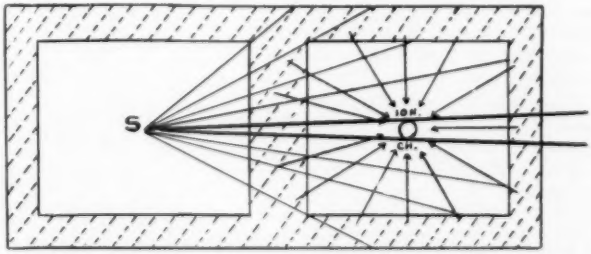


Figure 2. How secondary radiation may upset calculations for radium protection. Completely shielded source, indicated by "S," gives off primary beam, defined by heavy black lines, which impinges on an object in another completely enclosed cubicle. Arrows from various directions represent secondary radiation from building material in second cubicle.

being the valedictory essay of the retiring editorial director to NED H. DEARBORN, NSC president

NOW SEE HERE, NED!

by
BILL ANDREWS

SEVEN YEARS AGO you were rash enough to listen to Paul Jones' advice and make me the editorial director of the National Safety Council. The V-J Day ticker tape was still draped from window sills when you turned me loose on the beat as editor and reporter for the Council's eight magazines.

As supervising editor, I have led a most dull and uninteresting life. I'm turning you back nine magazines instead of the eight you gave me. I can draw you some pretty charts to show circulation went up because the people I work with did good jobs. When I've said that, I've said all that's important about me in my role as a little big shot.

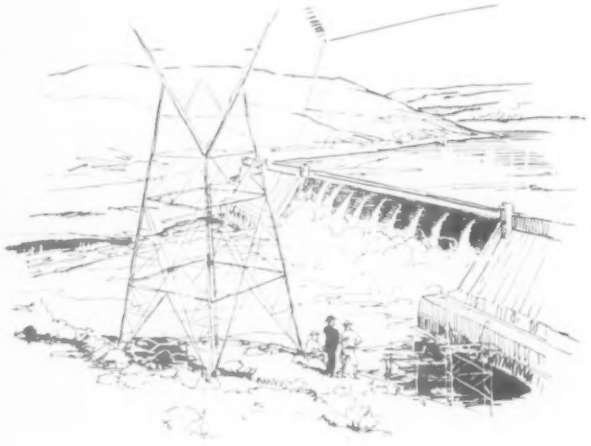
But as a reporter prowling the safety movement, bulling with ship captains and plant superintendents, watching the chemists and the ditch diggers work, listening to the wise men and the boobs, watching the sunsets from squad cars and the dawns from truck cabs, exploring the scroll cases of giant turbines and the smoke-filled rooms of national coventions—in the course of all this rambling I think I've learned some things about the safety movement you ought to know.

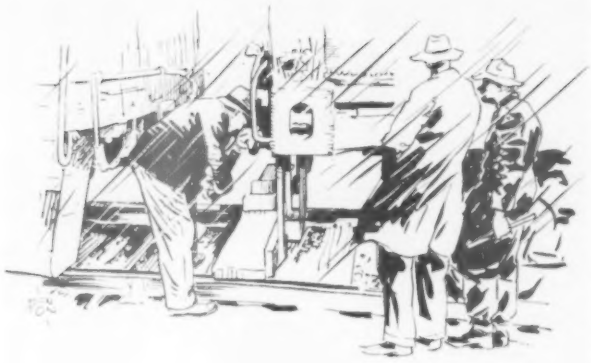
My specialty is not the high-level committee, or the appropriate distribution of responsibility and credit to effect plans of national cooperation. It is safety at the point at which it meets the ultimate consumer: down where safety is a duty hopelessly intertwined with a dozen other duties; down where a guy doesn't rate a placque for his services, where he may get somebody's blood on his shirt and then be too busy to change it until the end of the shift.

There was a bucker up in the Cascades last spring bucking a large tree that had fallen awkwardly across a small ridge. There were several interesting possibilities as to what would happen when he made a certain cut across that tree. All the possibilities involved the sudden departure of heavy segments of the tree in completely unpredictable directions, with more than a possibility that the bucker would get killed. I doubt if he was an expert physicist, capable of charting resultants of force in such a complex situation. He was, in fact, a gallused, lanky, homely guy with a quart bottle of coal oil on his hip and a look on his face that suggested intelligence but not learning.

It was beautiful. He cut down from above part way, stopped, reflected, spat profoundly, started some judicious cutting from up under. He had time to reflect upon some of the reactions of the tree to his amputation. He had time to make a number of variations in his attack on it. He took time to do his job by the rule of a most accurate thumb, so that, when the steel tore through the last remaining fibers, the two butts of the log skidded across each other about six inches, then locked firmly and solidly. The bucker spat again, and moved on to the next job.

And I remember a night on the Monongahela when the fog blotted out the tow ahead of us, and the Dravo Corp. pilot took the river by radar. There was another tow boat, stranded blind across the river as we came down, with no electronic eye to tell the pilot where was what. Our pilot, talking by loud speaker to his crew, 600 feet away on the head of our tow, gave them directions to pass onto





the blinded pilot on how to maneuver his craft to get out of the way and tie up to a friendly bank until the fog lifted.

You've spoken of cooperation, Ned. I've seen it on the river.

Frank Gerard and I walked Western Cartridge's East Alton plant one day. Out on the burning grounds, we stayed discreetly behind the bunker while the scrap explosives flared wildly, and I reflected on the irony of a world in which the disposal of oily rags causes more loss of life than the disposal of nitroglycerine.

Did you ever watch tin plate rolled out at 70 miles an hour? It's quite a sight, especially if you've ever worked with tin plate and know the tearing slash of its raw edges. It was in the plant where I saw the tin plate fly that I met a superintendent who admitted to me that his own plant scared him. It was, understand, a good tin mill, with a good record. But you should see how they designed the protective railings around and over tally desks—heavy steel tubing as thick around as a husky man's chest. Scared he was—good and scared. Not panicky, not jittery, but deeply aware of menace in the operation, dead serious in his efforts to persuade the employees that they live in a difficult environment only at a price in vigilance.

When you ride patrol with any state highway force, you learn some things about traffic safety. There's a nice stretch of four-lane east out of Gary, Indiana, taking the heaviest part of Chicago holiday traffic to Indiana, Michigan, and Ohio. In the nature of things, at the start or end of a summer weekend, traffic is very heavy in one direction, very light in the other. The eager motorist, blocked in his lane, sees that empty lane alongside, is often tempted, often yields. Ordinarily he gets away with it. But the troopers on the road also know that third-lane driving is one of the deadliest killers on this highway.

It's quite an experience to watch a good trooper chase and take a third-laner in heavy traffic without putting his own patrol car into the third lane to multiply the hazard. And it is a test of the trooper's training in the courteous approach to the motorist when he has to explain, with only decent emphasis, just how unimpressed he is by the third-laner's explanation that he was "forced" over by some other driver.

And there is one little clicking sound that I will always associate with night police patrol—the reflex action of the officer in the right hand seat to set the lock on the door beside him when his partner wheels the car around and starts feeding gas in a 90-mile-an-hour chase after a speeder.

But that stuff, the meat and color of the safety beat, still proves nothing of value to you—it doesn't say anything about how today compares with yesterday so that you can know how the total safety effort is getting across.

A very wise scholar I once knew and worked with defined a reporter as "a sociologist with a deadline." Let me, then, play sociologist for the moment, putting labels on the impressions I've gained of changing attitudes in the field of safety over the last seven years.

First, I truly believe the man on the shop floor, his straw boss and his super are far more conscious of safety than they used to be. Don't ask me to say why—but it is a strong impression that I've

—To page 76

Three-Fingered Menace

A report on Poison Ivy

By JOHN F. KILGUS, JR., M.D.

LOST-TIME from poison ivy dermatitis has long plagued the Connecticut State Highway Department. Finding that protective creams and education were not the whole answer to the problem, they enlisted the aid of the Health Services for State Employees, a division of the Connecticut State Health Department. The Health Department had been interested in rhus dermatitis for a good many years, and its files contained considerable helpful material.

Duncan (1), writing in the *New York Medical Journal*, attempted to popularize the old folk remedy of chewing poison ivy leaves. A couple of years later, Strickler (2) advocated the use of the Tincture of Rhus leaves orally, and a year later Shamberg (3) suggested the use of the tincture by hypodermic. Other clinicians were unable to wholly substantiate the claims of these earlier writers. Clock (4) reported that a preparation in an almond oil vehicle proved more potent and less toxic as well as less painful on administration than the alcoholic preparations.

The fact that most of this experimental work was not too well controlled and the promising results could not be duplicated by later work on the part of other dermatologists and allergists would probably have doomed the idea to failure, except that various drug manufacturers came forward with their own versions. The idea of being able to treat or prevent Rhus dermatitis by some simple oral or hypodermically administered preparation proved so popular that many other physicians were tempted to renew the subject.

Manlove (5), in an article published in 1935, concluded that "As the active principle is probably a non-antigen, the response to injection is not as dependable." Howell (6), writing twelve years later, still expresses the same feeling in the summary of his article: "Based on these results (the results of experimental work with intramuscular injection of a patent brand of poison ivy extract in the treatment of acute poison ivy dermatitis), it is the author's opinion that poison ivy extract is contraindicated for the treatment of acute Rhus dermatitis. The procedure has not stood the test of time and has often been observed to do harm."

In 1948, Hoagland (7) carried out a carefully controlled attempt to immunize cadets during their summer maneuvers at Camp Buckner, an area that abounded in poison ivy and in which the cadets were affected annually. This group of cadets consisted of 33 men who had had poison ivy dermatitis the previous summer.

This article has been condensed from a bulletin of the Connecticut State Department of Health, Health Services for State Employees, Hartford, Conn.

Twenty-one cadets received injections of poison ivy extract contributed by two manufacturers in accordance with their directions. The other twelve men were used as controls. Of the control group, 83.4 per cent developed a dermatitis while 66.6 per cent of the treated group were affected.

He concludes, "In an appraisal of the efficacy of preventive inoculation of poison ivy extract, it must be repeatedly stressed that one is attempting to evaluate the effect on a person whose sensitivity is spontaneously fluctuating and whose contact with vegetation is never precisely the same. Furthermore, the plants themselves undergo spontaneous (and in recent years, chemically induced) changes from week to week—not to mention year to year. The imponderables in an appraisal of the worth of prophylaxis were remarkably brought out by Molitch and Poliakoff (8) who, encouraged by apparently 100 per cent successful inoculation of 40 boys, proceeded to hand six of them poison ivy leaves which were held for only 30 seconds; dermatitis promptly developed in 5 of the 6 and was severe enough to necessitate hospitalization. The only boy who was unaffected was the only one who never previously had ivy poisoning."

Sharlit and Newman (9) concluded from their experiments that not all preparations of poison ivy extract on the market were effective, but that an effective preparation could be made. They prepared a stock solution by extracting 10 grams of freshly gathered poison ivy leaves with 100 cc of absolute alcohol. The extract used in their experimental work was a 1:1000 dilution (1 per cent of stock solution), in absolute alcohol. The dosage 1/10 cc was injected subcutaneously.

They report that of the 74 patients with acute Rhus dermatitis treated, 63 received complete relief in four days; 11 did not; none of the 8 controls treated with absolute alcohol received relief, and none of the 18 controls treated with ineffective preparations (as proved by failure to give a positive patch test) were relieved in this four day period.

Several years ago, the Connecticut State Highway Department under the direction of Safety Engineer A. M. Addison found that it was able to reduce the number of poison ivy cases among its field workers 70 per cent by the use of a protective liquid, Ply No. 9, marketed by the Milburne Co. of Detroit, Mich. Their instructions to highway workers as outlined in their Safety Memo No. 527, dated July 27, 1949, are as follows:

1. Plyothol should be applied and *rubbed in dry* at the time of the employee's arrival at the garage. This is advised before he handles any tools, etc., that may be contaminated with ivy oil. This will also neutralize any contamination picked up while the man was dressing with clothing from the previous day.

2. Ply No. 9 should then be applied after the Plyothol. Application of Ply should include all exposed areas, such as hands, arms, ankles, face, neck, ears, etc. This *too* is to be *rubbed in dry* at time of application.

3. During the course of the morning's work, Ply No. 9 may be removed by friction of tools, clothing, etc., and will have to be reapplied at the noon hour. Once again, the need for Plyothol, the neutralizing agent, is apparent; otherwise, the poisonous oil is sealed in when Ply No. 9 is again applied. Rub in dry a small amount of Plyothol on areas that may be devoid of Ply. Then, a new application of Ply will normally protect the employee for the balance of the day.

4. At the end of the day, it is advisable to again apply a small amount of Plyothol to hands and arms, to avoid giving a secondary infection to other employees or the man's own family upon his arrival home.

5. A complete wash with a good grade of yellow laundry soap is recommended. Gritty soaps should be avoided, as any scratching of the skin surface will invite infection.

Special precautions to be taken are those of exercising extreme care at home in regard to clothing exposed to ivy contact:

1. Endeavor to keep contaminated clothing in a location away from the rest of the family.

2. Take off your trousers before removing your shoes, to avoid secondary infection.

3. Remember—Ivy oil will remain active on clothing up to three or four days! Treat it with caution.

Added to these precautions, in 1950 a few workers were given two injections of 0.1 cc poison ivy extract (Arlington Chemical Company), one week apart. This work was carried out by Dr. Robert L. Quimby, then Chief of Health Services for State Employees, after a careful review of the literature and consultation with a number of leading dermatologists and allergists. The results, though far from conclusive, were encouraging.

In the Spring of 1951, the writer assisted by Ronald Garneau of the Safety Division of the State Department traveled about the state visiting the various Highway garages and administered this same preparation (Poison Ivy Ex-

—*To page 84*

TABLE II

Fiscal Year	Medical Cases	Lost Time Cases	Days Lost	
1947-48	42	40	286	No Inoculations
1948-49	29	25	118	No Inoculations
1949-50	10	15	102	Inoculations
1950-51	10	17	111	Inoculations

TABLE I

Total Employees Inoculated—469—6 lost time; 25 days lost; 1.28%
Total Employees Not Inoculated—1407—11 lost time; 86 days lost; 0.78%
Permanent Employees Inoculated—387—1 lost time; 1 day lost; 0.26%
Temporary Employees Inoculated—82—5 lost time; 24 days lost; 4.10%
Permanent Employees Not Inoculated—1312—2 lost time; 23 days lost; 0.15%
Temporary Employees Not Inoculated—95—9 lost time; 63 days lost; 8.55%

Spot spraying with Hudson electric sprayer.

Space spraying with compressed air overhead units.

Death to Pests

with safety for higher forms of life

By EMMET CHAMPION

THE clearly defined legal responsibilities set forth by the Food, Drug and Cosmetic Act make it essential for the food processor to exercise caution when considering the insecticides to be used in his plant for insect control, and especially their proper application.

This act defines a food as adulterated, if it contains any added poisonous or deleterious substance not required in the production of the food. Thus, in the use of toxic materials such as insecticides and rodenticides, it is the definite obligation of management to protect its products from contamination and adulteration.

A matter of further significance is found in the Federal Specifications for Insecticides, which provides that they . . . "shall not cause irritation to man nor be poisonous to man when applied in the usual manner in the destruction of houseflies . . . and of common household insects." The responsibility rests with the food manufacturer, and not with the insecticide purveyor, as long as his products are properly labeled and comply with the Federal Insecticide Act.

Toxicity of Insecticides

It is imperative, therefore, to recognize that *all* insecticides are poisons, and are to be handled as such. It is also well to understand the wide range and varying degrees of toxicity of these pest control substances and the serious hazards involved in their careless or improper use.

Aside from the inherent acute and chronic characteristics of the more hazardous chlorinated hydrocarbons, the base oils and solvents bear special scrutiny. Recorded fatalities and poisoning cases of humans have disclosed the seldom recognized fact that the solvents and base oils sometimes share an equal part in producing the toxic symptoms.

Thus it is wise to select an insecticide of such a low order of toxicity as to be relatively harmless to humans. Since the base oils usually comprise as much as 90 per cent or more of a finished spray, be sure the aromatic hydrocarbons and other harmful components have been removed. Many of the base oils found in some finished sprays contain these contaminative and toxic ingredients.

Types of Insecticides

It has been our observation in the field that many sanitation employees do not understand the basic functions, characteristics and hazards of the various chemicals used to control insect and rodent infestation.

It is not enough for top management alone to understand these principles. It is also management's responsibility to see that every

EMMET CHAMPION *is with Mill Creek Products Company, Inc., Chicago. This article has been adapted from a paper presented at the 27th Annual Training Conference, Technical Bakers Institute, Chicago, April 8, 1952.*

plant employee directly or indirectly concerned with sanitation has a thorough knowledge of the materials being used, understands their hazards and exercises the necessary safeguards in handling them and is well schooled in proper methods of application.

Since all insecticides are potential adulterants, they should always be applied so there can be no possible contamination of foodstuffs, either raw or finished. Exposed food products and processing equipment should be removed from the areas being treated, or carefully covered and protected from exposure.

The method of applying insecticides is fully as important as what you use. The use of a poor quality and ineffective insecticide will never give satisfactory results, no matter how well applied. Conversely, a good effective insecticide is seldom better than the application technique employed. To accomplish optimum results, economy and safety, let us study some of the types of pesticides commonly used, and consider some prime principles in correct spraying procedures.

Contact Insecticides

Contact insecticides kill almost immediately upon coming in direct contact with the insects at the time of spraying. The base oils used as the diluent are usually highly volatile and evaporate quickly, leaving little or no contaminating residues.

Advantages:

1. Quick knockdown and immediate kill.
2. Highly irritating to insects, forcing them into the open.
3. Immediate kill precludes slowly dying insects falling into food being processed.
4. Less danger of contaminating accidentally exposed food or utensils, and no messy or dirt collecting residual deposits.

Disadvantages:

1. No residual control may be expected.
2. More frequent applications necessary to maintain control.
3. Will not penetrate sufficiently into deep harborages for complete kill, or control casual invaders entering the plant between spraying periods.

Space Spraying

Flying Insects — Flies, Moths, Gnats, Fruit Flies.

For the control of flying insects, the most important factor is to employ equipment that will produce a very fine micron particle size, so the particles *float*, and remain in the air for the longest possible period of time, thus subjecting the insects to continuous contact with the "fog." Larger particle sizes will precipitate and rapidly settle to the floor and minimum results can be expected.

All windows, doors and other openings should be closed until the spray is completely dispersed. One or two slow moving fans will help circulate the spray throughout the area and better results will be obtained with less material consumed.

If manual spraying is employed, point the sprayer toward the ceiling and direct the spray toward windows and lighted sections, as flying insects will always head for light.

If the spraying is accomplished at night, put the lights on at one end of the room and drive the spray toward the lighted area.

An important fact to remember in space spraying: fogging up a room will kill only the flying insects. The crawling variety will be safely protected in crevices where *lethal* doses will not penetrate, and the percentage of kill will be negligible. Spray before or after production and cover all food contact surfaces, so no dead or dying insects will drop into food while being processed.

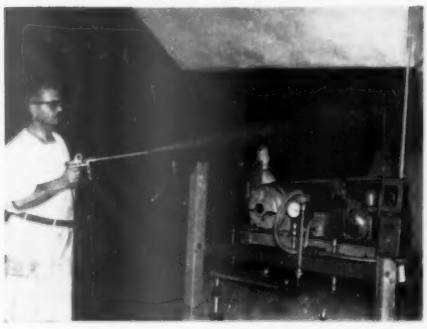
Direct or Spot Spraying

Crawling Insects — Roaches, Weevils, Silverfish, Ants.

For fast clean up of infested areas, use a flat spray pattern with a coarser particle size and drive the spray with strong pressure into cracks, crevices and harborages, so the surfaces are slightly damp. A quick clean up and kill is thus accomplished. Observe and mark the spots where the spray drives the insects into the open and then

—*To page 81*

Spot spraying with compressed air.



Space spraying with an aerosol fog generator. The fine mechanical fog has unusual penetrating power.

Cause AND CURE

These examples, taken from actual cases, are presented for the use of people responsible for safety. It is believed that these, or similar cases experienced in the reader's own plant, can serve as a basis for safety discussion.

Makeshift Steps Again

To step to the ground from a platform, an employee first stepped on a small metal barrel. It had been up-ended and used for a step from a platform built four feet from the ground. Ice and snow on the barrel caused him to slip and fall to the ground, striking his right arm. He suffered contusion, acute bursitis, and muscular strain and was away from work for a week.

Correction: While steps have been provided at ends of the long platform, they were located too far for convenience. After the accident steps were built where the barrel had been placed.

"Out of Sight—Out of Mind"

A mobile motor truck crane with dragline bucket had been spotted into working position when the operator noticed that the tire on the left outside front dual wheel was low. The operator then told the oiler that he would have to pump the tire up to the regular pressure. The oiler went to the truck cab and secured an air hose; he then proceeded to unwind the wire from around the coiled hose. At this point, the operator notified the oiler that he was going to operate the crane and had made about two passes with the bucket, swinging clockwise, when he felt the machine bind. The operator stopped the machine and then found that the oiler was caught and pinned between the counterbalance on the cab and the truck frame. Death resulted.

Correction: The Investigating Committee's report indicated that the oiler was standing on the opposite side from the crane operator's cab when connecting or getting ready to connect the air hose to the air receiving tank on the truck frame. The overhang of the counterbalance, when swinging, covers the connecting point at the air receiving tank.

1. Oilers should stand clear of the swing of the bucket and of the crane cab at all times.
2. Operators should, at all times, be aware of the location of oilers and other workers in the immediate area of the machine.
3. When the crane is being operated, no person should be working on the crane or around the mobile truck where he could be caught in moving parts or struck by the swing of the cab.
4. When repairing or servicing cranes, the machine should be stopped and the motor power shut off.

Opening Car Doors

An employee was preparing to unload sulfite bales from a freight car. When he pushed the door open, a bale fell out and knocked him to the ground but fortunately, he lost only a few days from work.

Correction: When a car is loaded with baled material, or material in boxes and other containers, a safe procedure is to open the door a few inches and look to see whether the load has shifted during transit. Difficulty in opening the door is sometimes an indication that this has happened. Using the handles on the side of doors to pull them open is safer than pushing against the end of the door.

Congress Previews

THOUSANDS of safety men all over the United States and Canada have marked the week of October 20 on their calendars. That is the week of the 40th National Safety Congress in Chicago.

Five hotels will be needed to provide meeting rooms for more than 200 meetings—general and subject sessions and meetings of sections and specialized groups.

Following are the hotel assignments for the various meetings:

Conrad Hilton—Annual Meeting, Banquet, Early Morning Sessions, Aeronautical, Air Transport, Cement and Quarry, Coal Mining, Construction, Electrical Equipment, Industrial Nursing, Metals, Mining, Petroleum, Printing and Publishing, Public Employee, Home, ASSE Annual Meeting, Subject Sessions.

Congress—Automotive and Machine Shop, Glass and Ceramics, Meat Packing, Tanning and Leather; Power Press and Forging; Textile, Traffic, Wood Products.

Morrison—Food, Marine, Railroad, School and College.

LaSalle — Commercial Vehicle, Transit, Farm.

Sheraton — Chemical, Public Utilities, Pulp and Paper, Rubber.

More hotel rooms are available this year but demand has kept pace with supply. More than 4,000 reservations have been received to date and most of the available rooms in Loop hotels have been reserved. Those planning to attend are urged to make reservations as soon as possible. Requests for rooms should be addressed to Congress Housing Bureau, National Safety Council, 425 North Michigan Avenue, Chicago 11.

With the deadline at hand, programs for sectional meetings are nearing completion. For the Annual Council Meeting on Monday morning a featured speaker will be a prominent insurance executive, Jesse W. Randall, president of The Travelers Insurance Company, Hartford, Conn.

At the Banquet the speaker will be the Honorable Luther W. Youngdahl, Judge of the United States District Court for the District of Columbia and formerly governor of Minnesota.

The Early Morning Sessions, Tuesday through Friday, will be conducted by Dr. Arthur Secord, supervisor of adult education at Brooklyn College, Brooklyn, N. Y. The topic for the sessions will be announced later.

The entire Safety Exposition will be held under one roof this year with more exhibit space available than ever before. In addition to the vast exhibit hall on the lower lobby of the Conrad Hilton, the Normandy Lounge on the second floor has been secured, with additional space on the third floor. Because of an extensive remodeling program at the Congress Hotel, the exhibit facilities there will not be available this year.

Forty years of organized safety work will be celebrated by special features commemorating the First Cooperative Safety Congress in Milwaukee in 1912. The National Safety Council would like to hear from any person who participated in that first Congress.

Life Savers Enliven Safety Drive

SIXTY THOUSAND candy Life Savers were distributed to employees of the Owens-Illinois Glass Company plant at Alton, Ill., during a special six-week safety campaign promoting the theme, "Safety is a Life Saver, Too!" And the stunt, one of several designed to hypo the year-round program, paid off. During the drive only one department, Machine Manufacturing, out of 34, had a disabling injury, and 3545 employees participated.

A teaser program was started a month in advance to stir interest. A large signboard near the main entrance showed a huge Life Saver lettered, "Safety is a Life Saver, Too!" Cardboard Life Savers a foot wide were strung from the ceiling in all departments. Following this the plant's weekly newspaper published a series of illustrated articles describing the contest.

Fifteen thousand packages, with four Life Savers each, were purchased for about $100. The packages were imprinted with the campaign slogan.

On the safety contest's kick-off day, every employee entering the plant received a package of Pep-O-Mints. During the following six weeks, cartons containing 60 packages were awarded to winners in the contest. Pictures showing these winners taking the Mints to their families were used to publicize home and off-the-job safety. Names of winners also were listed in the plant newspaper.

Karl Steinkraus, plant safety director, originated the contest.

Rules of the Alton safety campaign were:

1. Contest to run for a six weeks period.
2. A department must go an entire week without a disabling injury in order for one of its members to win a carton of Life Savers.
3. In large departments one carton was given out for every 200 people in the department.
4. The president of the Welfare Council and the safety director made the drawings every Friday.
5. A lost-time accident knocked the department out of the drawing for the week in which it occurred.
6. The foreman presented the carton of Life Savers to the lucky person in his department.

Dad takes a prize home. Sharing the Life Savers won in the plant contest which ties in off-the-job safety with the plant program.

DATA SHEET D-W 12

Portable Power Chain Saws

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425 North Michigan Avenue, Chicago

1. Chain saws powered by gasoline and electric motors are used principally in logging, but are also used in construction, electrical utilities, land clearing, tree trimming, pulpwood cutting, and similar work. Air and hydraulically operated chain saws are also occasionally used.

2. The techniques described in this data sheet apply specifically to logging but can be used with equal success in other occupations.

3. Logging terminology varies in different parts of the country. For example, sawing a tree up into log lengths is usually called "bucking," and that term has been used in this data sheet although it is not known in certain sections. Likewise, the man who supervises the work of all fallers and buckers is called the "bull bucker" or "falling and bucking supervisor" in some sections of the country and the "head sawyer" or "walking boss" in others.

4. Conditions and logging practices also vary. Level ground with little undergrowth and deadwood is found in some sections, while mountainous country obstructed by fallen trees and undergrowth prevails in such sections as the Northwest Pacific slope. In some areas snow is a major problem. Trees 10 inches thick and less are cut in some operations, in others trees run to 6 feet and more in diameter.

5. The saw used should be no larger or longer than required for the size of the timber being cut. Light weight saws suitable for small timber and for limbing require less exertion by the operator and are less likely to cause strain.

6. Complete statistics are not available to show the relative frequency and severity of accidents

This Data Sheet is one of a series published by National Safety Council. It is a compilation of experience from many sources. It should not be assumed that it includes every acceptable procedure in its field. It must not be confused with American Standard Safety codes, federal laws; insurance requirements; state laws, rules and regulations, and municipal ordinances. Reprints of Data Sheets are available from the National Safety Council.

Figure 1. Timber fallers using a typical two-man power saw.

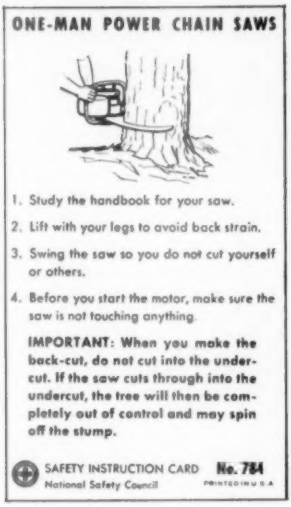

ONE-MAN POWER CHAIN SAWS
1. Study the handbook for your saw.
2. Lift with your legs to avoid back strain.
3. Swing the saw so you do not cut yourself or others.
4. Before you start the motor, make sure the saw is not touching anything.
IMPORTANT: When you make the back-cut, do not cut into the undercut. If the saw cuts through into the undercut, the tree will then be completely out of control and may spin off the stump.
SAFETY INSTRUCTION CARD No. 784
National Safety Council

Figure 2.

in the use of power saws as compared to hand saws; however, there is no indication that the use of power saws has increased cutting-crew accidents.

7. In one company's study of 467 cutting-crew accidents, saw cuts and axe cuts comprised 58 per cent of the accidents where hand saws were used as against 30 per cent for power saw crews. Accidents such as slips and falls and sprains and strains which occur in handling power saws and in moving them from one location to another caused 49 per cent of power saw accidents as against 29 per cent due to similar causes to hand saw crews.

Hazards

8. Operators of chain saws are exposed to most of the hazards of men doing the same work with hand saws. In addition there are some special hazards:

a. Falling while carrying the saw or when sawing.
b. Sprains and strains from carrying the heavy saw and working with it.
c. Being cut by contact with the chain while it is in motion.
d. Being cut by the chain not in motion, either on or off the saw.
e. Injuries from starting the gasoline motor.
f. Inhaling exhaust gas.
g. Electric shock from electrically operated saws.
h. Being struck by wood from overhead due to vibration of tree.
i. Getting sawdust in the eyes, especially when holding the tail stock or "stinger" end of the saw above the head.
j. Burns from contact with hot muffler or cylinder head.
k. Injuries due to the saws binding and kicking back at operator.
l. Injuries from falling trees and snags or rolling logs due to inability to hear because of noise of gasoline motor.

9. The operation of a chain saw for falling is a one- or two-man job, depending upon the type being used. If a two-man saw, the head faller handles the engine end of the saw since he is the more experienced member of the falling crew.

10. If a one-man saw, the operator should be an experienced faller and should use the same precautions as when operating a two-man saw, being exceptionally careful not to cut into the "undercut" or "notch" with the outboard end of the cutting rail.

11. Some firms use three-man crews but the same safety rules apply. The head sawyer—bull bucker—woods boss—is in charge and is responsible for the safety of the falling crew and any others who might be endangered by the falling operations. He should be an experienced faller.

12. When electric saws are used by line crews only qualified linemen should tap into power lines. The saw frame should be grounded.

13. Proper selection of saw operators is as important as for other skilled occupations. The inexperienced men should work, during their training period, with an experienced faller under the constant supervision of the bull bucker.

Handling and Transportation

14. When chain saws are regularly transported by truck, suitable racks should be provided. When only occasionally carried by truck they should be securely tied to prevent shifting.

15. The larger chain saws are heavy and unwieldy to carry over rough ground, fallen timber and through underbrush. The moving of the saw to the work place

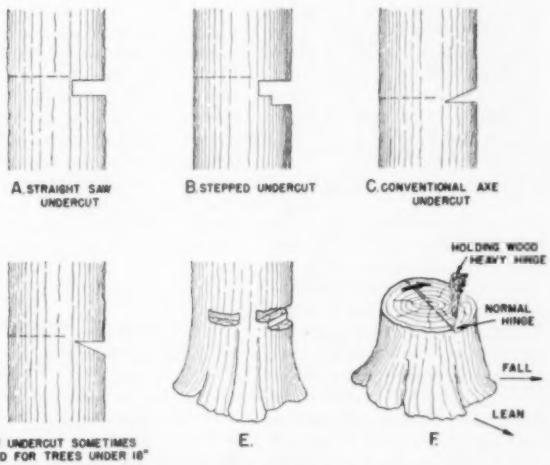


Figure 3. Properly made undercuts make falling safe. When necessary make side notches and leave extra holding wood.

Figure 4. Removing the undercut wood with a pulaski.

should, therefore, be carefully planned. If the work places are some distance from the road the larger saws are usually left in the woods overnight and only the chains carried to camp for servicing and sharpening. When not in use, precautions should be taken to prevent anyone's falling over the saw. The usual precaution is to place it alongside a log.

16. After the undercut is completed, after the backcut is completed, and when the saw is to be moved from one tree to another, the motor should be stopped. On electric motors, the cables should be disconnected at the motor end. When the saw is to be carried, the cutting bar should be turned to a vertical position.

Operating the Saw

17. To coordinate properly the work of fallers working with two-man saws, a standard set of signals should be established. Because of the weight and power of the equipment it is especially important that men operating chain saws have a secure footing so that they will not fall. The man on the engine end should always stand on the high or safer side of the tree.

18. The chain should not be started until the saw is in position, ready to cut. The motor end should be held solidly against the tree before starting the cut to prevent jerking or jumping. The operators should stand at the ends of the saw, never beside it. They should have both hands on the handles and should keep them there until the chain stops.

19. The bar should be swiveled so that the cutting teeth run toward the motor, thus tending to pull the motor end against the tree. The man at the motor end should keep his body in contact with the motor frame at all times while the saw is in operation. Then, if the saw binds and kicks back, he will be pushed rather than struck. The motor end of the saw should be started into the tree first. After the saw is well into the cut the tail-stock end should be swung around to bring the saw evenly into the cut. Then the saw will not sag in the middle

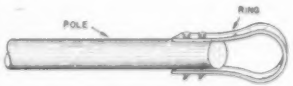


Figure 5. Pole for holding the tail stock of saw for high reaching. The pole should be six to eight feet long and about 1¼ inches in diameter. The ring should be slightly larger than the tail stock of the saw and made of strap iron.

and perhaps cause the chain to jump out of the groove in the bar.

20. Cuts from the running chain are the most frequent and serious accident type resulting from the use of power saws. To prevent this type of accident it is extremely important that the fallers stand beyond the end of the saw, never at the side.

21. Fallers must be especially careful never to let any part of their bodies come in contact with the chain.

22. Undergrowth should always be cleared from around the tree with an axe before the saw cut is started. Brush and saplings should never be cut with the chain saw because such growths are likely to whip when they are cut.

Undercutting

23. Properly made undercuts make falling safe. Correctly done, the undercut guides the direction of fall. In chain saw operation the undercut is usually made with the saw rather than with the axe so it is impractical to make the conventional V-shaped undercut. The usual method with a chain saw is to make two nearly horizontal cuts 3 to 8 inches apart, depending upon the diameter of the tree, extending to about one-third the thickness of the tree. The section between the upper and lower cuts is then cut out with a pulaski, as the special axe is sometimes called. (Figure 3-A.)

24. This tool has one blade turned at right angles to the other like a mattock. With a few strokes it is possible to take out the undercut wood.

25. When a big tree is being cut, a stepped undercut is used to keep it from rolling on the stump. The step should always be parallel to the undercut. (Figure 3-B.) When trees are less than 18″ in diameter some operators prefer to make a conventional V-shaped undercut, making the horizontal cut with the saw and chopping out

—*To page 92*

The SAFETY VALVE

The High Calling

SOME MONTHS BACK, Bill Andrews wrote an installment of his *Diary of a Safety Engineer* entitled "I Lose My Right Hand." The hero had just lost a valued assistant who had been lured away by a job that offered more money and greater opportunities of self expression.

Right now, I'm in the same spot. You can feel that way about a boss as well as an assistant. As you've probably learned from an announcement in the May issue and a spread up front in this one, Bill is leaving us to become lay missionary in charge of Calvary Episcopal Church in Roundup, Mont.

We'll miss Bill's understanding help and counsel in getting out our magazines and his patience and tolerance in the stress of deadline crises and the errors that creep into printed pages. We'll miss the bull sessions on religion, philosophy, belles-lettres, and what not.

To readers of NATIONAL SAFETY NEWS, Bill Andrews is best known as author of the *Diary*. To my knowledge, he is the only writer who has been conspicuously effective in using fiction as a medium for getting safety across.

This industrial soap opera, as Bill calls it, is full of human interest angles. His hero has his times of triumph and frustration, and many readers have undoubtedly gone through similar experiences.

Bill found ideas wherever he went. When riding a squad car with state troopers, with the crew of an ore boat coming down the Great Lakes, in the woods and sawmills of the Pacific Northwest, or visiting a plant nearer home, he was studying people as well as machines and methods, with an understanding heart as well as open eyes and ears.

Bill's service to the Council can't be measured in by-lines alone. As editorial director much of his time and energy was devoted to planning and handling the administrative work of getting out nine magazines and the personnel problems involved.

Bill is an earthy person. That side of his nature, balanced by a deep faith and dynamic conviction, should be invaluable in his ministry to human beings who have bodies as well as souls.

It isn't money that drew Bill from a career which provided a reasonably comfortable living and considerable satisfaction in the job itself and its associations. In his mission church he will be like Goldsmith's vicar, "passing rich on 40 pounds a year." But it is a life that can be richly rewarding and I know Bill will find it so.

While ministering to his flock Bill will carry on studies leading to ordination in the priesthood of his church, pressing toward the mark for the prize of the high calling.

And drawing another text from Goldsmith, I have a feeling that any fools who might drop into a rear pew at Calvary Church to scoff would remain to pray.

Mouthfuls of Trouble

THERE ARE 700,000,000 teeth in the U. S. A. that need filling, an official of the American Dental Association told a recent meeting. At five bucks a fang, they would cost a staggering total of 3½ billion dollars. That would be for base metal fillings. Gold inlays would boost the total considerably.

And that isn't all the bad news. Extractions, plates, bridges, crowns, x-rays, cleaning, etc., would add many more millions to the bill. To get all of the needed work done this year would take five times as many dentists as we have at present, dental authorities estimate.

The dentist's office, thanks to novocaine, is no longer a torture chamber. The most painful part of dental treatment is now the bill. They haven't discovered any anesthetic for that.

Not long ago I saw a display of old time dental equipment—ill-fitting, uncomfortable store teeth and barbarous instruments used for extractions. They made me feel glad I hadn't been born a hundred years sooner.

In This Issue . . .

SELF-PRESERVATION in combat is part of basic military training but today's soldier must also be taught to meet the hazards of industrial occupations and of highway traffic. Here is the story of the safety program of one of the Army's larger units. (Page 20)

• • •

Ionizing radiations can cure and they can kill, and their use is growing in industry and in many of the sciences. Dr. F. A. Van Atta explains the nature of these radiations and the methods of using their benign qualities safely. (Page 24)

• • •

Months of outdoor activity in work and recreation bring an increase in poison ivy cases. A state highway department reports on experience in methods of prevention and treatment. (Page 28)

• • •

The Safety Engineer becomes a father again and the experience inspires a talk on two types of pain—the kind involved in bringing life into the world, and the useless kind resulting from needless injury. (Page 38)

Carman Fish

Pain Is a Price

(Fiction)

By BILL ANDREWS

June 2, 1952—5:00 A.M.

THE PAIN CAME AGAIN, and Sue's hand hung hard to mine.

"Six minutes," I said. "A half minute shorter than last time."

For a few more seconds, the pain held her, as she strained against the hard bed of the labor room. The sweat showed on her forehead and her lips were tight. Then the pain passed.

Sue smiled at me. "That was what they call a good pain—strong. It shouldn't be too long."

"Do you want me to tell the nurse?" I asked.

"No, not yet. I want to talk."

There was weariness in her voice, but it was a calm kind of weariness.

She said, "I almost wish you were away again. Oh, I want you here, but it hurts you, and it was better the first time when it all happened before you could get home, and I could pose as the tranquil madonna with my babe at my breast when you first came in the room.

"You didn't see me afraid—and I'll be afraid again before they chase you to the fathers' room. You've never heard me scream, dear, and I do it badly. Why don't you go now, so you won't hear me?"

I shook my head. She smiled again. "Thanks. I don't really want you to go. I'll try not to scream, not till you're gone, and maybe that'll help. But you won't mind if I groan? It's getting hard not to groan."

"I won't mind," I said. "I've seen pain before."

She shook her head. "That doesn't count. That was business. I've seen you in the emergency room, remember. I don't mean that you're callous. I know it hurt when you watched that compound fracture getting set, when you heard the screams of that gal who suddenly knew that her cut head was a badly torn scalp. Was it pain, that time, or was it only vanity?

"But those cases were business for you, for me, for the doctor. We had work to do. The doctor and I had physical work. You had mental work, a report form to pretend to fill out. An analysis to make of causes. Even a calculation to make and revise, whenever the screaming was too bad, about the amount of lost time."

I tried to shrug it off. "I've got business tonight. Thinking about a fine new baby and how to keep it in shoes. And the remodeling of the nursery. And how I'll get my shirts to the laundry this week."

She laughed. "A poor bluff, dear. Never stay with me if I scream. Not here, where you can't do anything for me, where you can't get away from the fact that I'm your wife, and you love me. If we were in a car wreck, you could treat me as a bit of damaged machinery to be repaired, and you wouldn't mind my screams so much, because you'd be busy. But here there's nothing for you to do except time my pains, and when I scream, it won't matter about the timing."

Then the pain hit again—five minutes. This time, along with the tautness of the body, the sweat on the strained forehead, there was a sob, quickly choked. When it passed, I could almost see the pain drain out of her face.

She started talking again, quickly, almost hastily.

"Pain's a price. I can pay it, for what it buys. For something to carry in my arms and see

through the measles. For something to protect. To love.

"There's so much pain that isn't a price for anything—just a penalty. The kind that doesn't buy anything and is the penalty for something not worth having.

"I know there's risk tonight, risk as well as pain. Risk to me and to the life that's in me. I'm scared, and that's part of the pain and part of the price.

"Always remember, in the emergency room, the screams are worse, not better, than they are here. They aren't buying anything. Remember the next time you . . ."

The wracking groan was between her lips before they clenched. She grabbed hard at my hand.

"Three minutes, that time," I said.

She shoved my hand away, spoke tautly through taut lips, loudly, "Damn your watch! Tell the floor nurse, and get out of here. Get out and let me yell!"

And then, after the standard hour of pacing the fathers' room floor, the six cigarettes, the abstracted scraps of conversation of another waiting husband, I learned I had a healthy daughter, that my wife was well. Half an hour later, I stood by the bedside, looked at Sue relaxed, silent, with the red baby on the bed beside her. There wasn't anything to say, and I walked home through the dawn to an empty house.

* * *

9:30 A.M.

Doc Moller took my cigar, lit it, and puffed reflectively.

"Vot I prescribe for you, it is coffee, black, very strong, like the cafeteria hasn't got. It is good I am a chemist, and can fill my own prescriptions."

He rummaged in a drawer, came up with a can of coffee, and began concocting a villainous brew in a beaker over a bunsen burner.

"So," he said, as we drank. "Now you haf a family. Not just you und a Frau und ein Kind—one child. Now you are a family und you can line up proud for a camera, like a little stepladder, one, two, three, four. Maybe five und six or eight you get to be yet.

"But now you are very short of sleep, und so you should drink more black coffee und then go avay and vork very hard so as not to be so sleepy."

* * *

3:00 P.M.

I wanted to visit Sue at the hospital, so I started to ask Harry Dexter to take over for me in the woodshop safety meeting. Then I remembered Sue's words, "The screams are worse . . . They aren't buying anything. Remember the next time . . ."

I decided this was the next time. This was what I was to remember, the fight against the futile, unuseful screams. To be specific, to push once more another inch in the fight against amputations and against splinter-borne infections.

It must have been a weird speech that I delivered. It was built around Sue's words, told as well as I could reconstruct them and the setting in which they were spoken.

When I got through, there wasn't any applause, and I started out, disgusted with myself for having thrown away an earlier speech idea that might have reached these guys, these tough-handed guys from the band saws and the jointers, for giving way to a personal sentimentality.

Reilly, the foreman, stopped me at the door. He held out his hand. "Thanks," he said.

"For a lousy speech?" I asked.

"For the best darned speech you ever gave, you fool," he said. And he blew his nose to prove it.

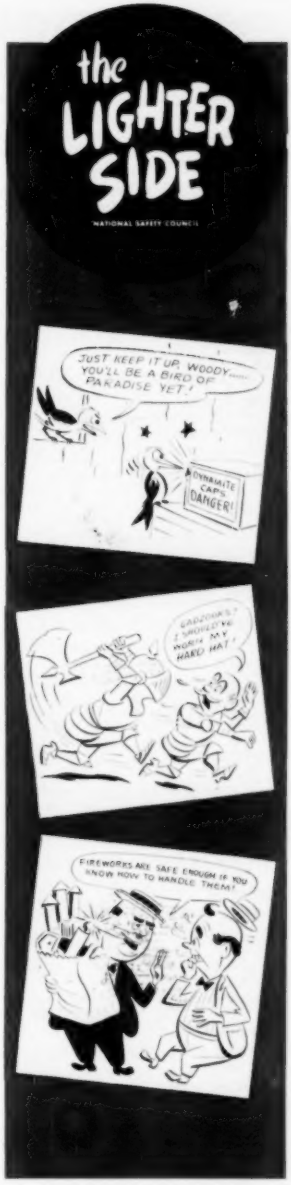
"That's quite a gal you married," he said.

I think he's right.

Safety vs. Time

It takes one minute to write a safety rule.
It takes one minute to hold a safety meeting.
It takes one week to plan a safety program.
It takes one month to put it in operation.
It takes one year to win a safety award.
It takes one lifetime to make a safe worker.
It takes one second to destroy it all with an accident.

Author Not Known


the LIGHTER SIDE
NATIONAL SAFETY COUNCIL
JUST KEEP IT UP, WOODY..... YOU'LL BE A BIRD OF PARADISE YET!
DYNAMITE CAPS DANGER!
SACRAMENTO? I SHOULD'VE WORN MY HARD HAT!
FIREWORKS ARE SAFE ENOUGH IF YOU KNOW HOW TO HANDLE THEM!

NATIONAL SAFETY COUNCIL

AUDITOR'S REPORT — 1951

To the Board of Directors, National Safety Council:

We have examined the balance sheet of NATIONAL SAFETY COUNCIL (an Illinois corporation organized not for profit) as of December 31, 1951, and the related statements of income and expense and changes in net assets for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We had made a similar examination for the year ended December 31, 1950.

In our opinion, the accompanying balance sheet and statements of income and expense and changes in net assets present fairly the financial position of National Safety Council as of December 31, 1951, and the results of its operations for the year then ended, and were prepared in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

ARTHUR ANDERSEN & CO.

Chicago, Illinois, March 23, 1952.

STATEMENT OF ASSETS AND LIABILITIES, DECEMBER 31, 1951

ASSETS

CURRENT ASSETS:		
Cash, including $90,831.59 held by Trustees		$ 240,915.68
U. S. Government securities —		
Savings bonds, at redemption value	$157,117.00	
Treasury bonds, at cost (market value $25,640.13)	25,318.31	182,435.31
Accounts receivable, less allowance for doubtful accounts of $11,342.55		414,087.72
Inventories, at approximate cost which is not in excess of market—		
Publications and merchandise	$456,212.54	
Raw materials and supplies	69,948.86	526,161.40
Total current assets		$1,363,600.11
DEFERRED CHARGES		67,195.71

FIXED ASSETS, at approximate cost:

	Cost	Reserves	
Furniture and fixtures	$111,197.63	$ 32,968.12	
Printing machinery and equipment	35,200.03	22,239.21	
Leasehold improvements	242,453.84	$ 29,296.38	
	$388,851.50	$ 84,503.71	304,347.79
			$1,735,143.61

LIABILITIES

CURRENT LIABILITIES:		
Accounts payable—trade		$ 104,330.86
Employees' income taxes withheld and accrued expenses		20,311.56
Deferred income — unfulfilled membership and service contracts		638,000.00
Total current liabilities		$ 762,642.42
CONTRIBUTIONS AND APPROPRIATIONS HELD FOR SPECIAL PROGRAMS		78,399.45
NET ASSETS EMPLOYED FOR THE BENEFIT OF MEMBERS:		
Unappropriated	$794,101.74	
Appropriated for future activities	100,000.00	894,101.74
		$1,735,143.61

STATEMENT OF INCOME AND EXPENSE FOR THE YEAR ENDED DECEMBER 31, 1951

INCOME:	
Dues, publications and services	$2,596,329.77
Contributions	562,044.83
Other income	41,000.58
	$3,199,375.18
EXPENSE:	
Publications and materials	$1,155,849.49
Technical and research	681,490.66
Administrative and general office (including $26,095.97 of depreciation and amortization)	518,973.29
Sales of memberships, advertising and services	262,425.68
Local chapter and council development	126,792.48
Publicity	120,211.93
Contributive fund solicitation	77,021.83
	$2,942,765.36
EXCESS INCOME OVER EXPENSE	$ 256,609.82

Management-Labor Cooperation for Safety

IN AN ARTICLE entitled "Labor-Management Teamwork," which appeared in the April 1952 issue of NATIONAL SAFETY NEWS, there were printed certain excerpts from a program for labor-management cooperation for safety which were adopted at a session of the 1946 National Safety Congress. In the article itself these excerpts were erroneously referred to as the National Safety Council's statement of policy on management-labor cooperation for safety.

Actually, the Council's policy on management-labor cooperation for safety was included as part of a general policy statement which was adopted by the Board of Directors on October 18, 1948, and published in a pamphlet entitled *Safety in Action*. The part dealing with management-labor cooperation reads as follows:

The Council recognizes the need for active participation in accident prevention on and off the job by both employers and employees, as individuals and as groups. The Council also recognizes that the conduct of safety work in industry is the responsibility of management. Whole-hearted cooperation for safety is urged between management and employees.

Since various methods have been successfully used to bring about such cooperation, the Council does not advocate any one method as opposed to another. The Council believes that the most effective procedure must be determined in the light of circumstances surrounding each situation and that the suitability of the method should be judged on the basis of the results secured in terms of accident prevention.

Copies of the entire policy statement, *Safety in Action*, may be secured free upon request, by writing the headquarters office.

Miners' Cap Lamps Aid Aircraft Maintenance

If a coal miner happened to visit United Air Lines' maintenance base at San Francisco he would be in for a surprise. Inspectors and mechanics there have borrowed the traditional miner's safety lamp to provide light when and where they need it—in wheel wells, the "innards" of aircraft engines, wing and fuselage compartments or spaces—where overhead drop lamps or flashlights are frequently awkward to use or give inadequate light.

The maintenance personnel have borrowed an idea from the dentists, too. They now use dentists'-type mirrors for examining points of an engine or out-of-the-way fuel connections not in the direct line of sight.

United Air Lines men do not wear the lamps on their caps as do miners, however. Instead the inspectors and mechanics carry the lamps around their necks, with the batteries in the pockets of their coveralls.

Safety experts prefer such lamps for other reasons, above ground or below. The lamp bulb is filled with gas and has two filaments of equal candle power. If one burns out the other remains operative. Should both lamp lens and bulb be broken, the bulb base automatically moves away from contact points, interrupting the circuit so that the filaments cool down and cannot ignite flammable gases that may be present in the atmosphere.

United Air Lines inspector uses a miner's safety lamp to examine repairs on a DC-6 aircraft engine. In his left hand he holds a dentist-type mirror which enables him to inspect parts not in line of sight.

The Edison R-4 lamps are capable of burning continuously for a minimum of 10 hours on one battery charging. At the United maintenance base, they are charged every eight hours.

These lamps have been adopted recently for service aboard the U. S. Maritime Commission's "mothball" fleet, to reduce electrical hazards caused by trailing cables, energized circuits and the exposed filaments of broken bulbs.

STATEMENT OF CHANGES IN NET ASSETS EMPLOYED FOR THE BENEFIT OF MEMBERS FOR THE YEAR ENDED DECEMBER 31, 1951

	Appropriated for Future Activities	Unappropriated
Balance December 31, 1950, as previously reported	$ —	$ 617,608.95
Adjustment of property records for prior years' depreciation	—	7,139.20
Balance at beginning of year, after adjustment	$ —	$ 624,748.15
Excess of income over expenses, as above	—	256,609.82
Transfer from reserve for industrial safety research	—	12,743.77
Transfer to appropriated	100,000.00	(100,000.00)
Balance at end of year	$100,000.00	$ 794,101.74

Small Businesses and Associations

By A. M. BALTZER

Director, Small Business and Associations Program, NSC

Man Bites Dog

The safety records of the DuPont Company are perhaps better known than DuPont's activities in the "small business" field. A number of petroleum companies requested DuPont's assistance in organizing and planning safety programs for their refineries, so DuPont perpared a very handsome 40 page book *Safety for the Small Refinery*, outlining a step-by-step program which included monthly safety campaigns. Of course, the Council is proud that its many materials and services formed the basis of the entire program. The outline form presentation in this attractive book makes it very easy for a small refinery operator to start a simple, yet effective program. Perhaps this is the start of a trend for more "help your neighbor" activity. At any rate it shows that industrial management can by voluntary effort "take care of its own."

Can Your Association Match These?

The International Acetylene Association, at its annual meeting in Indianapolis March 31-April 2, not only had special sessions devoted exclusively to accident and fire prevention, but wove those subjects into practically every one of the other talks. The credit for that, of course, goes largely to Herb Reinhard, Secretary of the I.A.A. and Chairman of our Small Business Committee.

The American Gas Association is stepping up its accident prevention program. Safety will be the dominant theme in their public relations program. Their monthly magazine usually contains feature articles on the subject. And, while we're on the subject of conventions, each AGA meeting will include, wherever practical, at least one talk on safety.

Of course, you want to do something to help small business in your industry. Your trade association is one of the best avenues of approach, so put the heat on them to give safety its just due on their next convention program. Go through channels if you have to, but make a note to give it your support.

Small Plants Can Win Safety Awards

Under the Council's new contest rules, 33 plants, with less than 200 workers, won the Award of Honor or Award of Merit in 1951.

H. F. Reinhard, chairman, Small Business and Associations Committee, National Safety Council.

Small Business and Associations Committee 1951-1952

EXECUTIVE COMMITTEE

H. F. Reinhard (Chairman), Secretary, International Acetylene Ass'n, New York.

Ivan F. LeGore (Vice-Chairman), Manager, Accident Prevention Bureau, Portland Cement Ass'n, Chicago.

Floyd E. Frazier, National Ass'n of Mutual Casualty Companies, Chicago.

John V. Grimaldi, Accident Prevention Dep't, Ass'n of Casualty & Surety Companies, New York.

G. Scott Kallenbaugh, Ass't Superintendent, Divn. of Safety & Hygiene, Industrial Commission of Ohio, Columbus, Ohio.

MEMBERS-AT-LARGE

Harry Brainerd, Executive Manager, The Western Pennsylvania Safety Council, Pittsburgh, Pa.

Reuel W. Elton, General Manager, American Trade Ass'n Executives, Washington, D. C.

Walter E. Montgomery, Safety Director, Quebec Asbestos Mining Ass'n, Montreal, Quebec.

S. M. MacCutcheon, Director of Safety, Dow Chemical Company, Midland, Mich.

Eric A. Nicol, Vice-President, P. Brennan Company, U.S. Yards, Chicago.

Dorothy Pellenz, Superintendent, Crouse-Irving Hospital, Syracuse, N. Y.

Robert S. Scott, Safety Director, Manufacturers' Ass'n of Montgomery County, Norristown, Pa.

M. G. Van Buskirk, Executive Secretary, Illinois Dairy Products Ass'n, Inc., Chicago.

STAFF DIRECTOR OF SMALL BUSINESS AND ASSOCIATIONS PROGRAM

A. M. Baltzer, National Safety Council.

As expected, many of these units were branches of large corporations, but at least 10 were small, independent companies. And, for all practical purposes, many of the branch plants operate as autonomous units, with but a shade of centralized safety program. It is reassuring to know that this many small companies could qualify.

New York Shipping Association Launches Program

On April 1, the Association set up the New York Shipping Association Safety Bureau with a full time staff director and three field men. The new Bureau functions

—*To page 91*

THE BIGGEST SHEET.... BEST WAY AND A BARGAIN

ARE YOU A MANUFACTURER?

American Can, Graybar, Alcoa, Johns-Manville, Allis-Chalmers, U. S. Rubber, Eastman, International Harvester, Union Carbide, Air Reduction, American Brass, Westinghouse, Ingersoll-Rand, etc. USE MAGIC LENS TISSUE.

A REFINERY?

Sun Oil, Ethyl, Socony-Vacuum, Texas Company, Atlantic, Carter, Cities Service, Shell, Gulf, Marlin, Continental, Esso, Phillips, Standard of New Jersey, Ohio, California, Indiana, Texas, etc. USE MAGIC LENS TISSUE.

A MINER?

Anaconda, Kennecott, Hanna, Colorado Fuel & Iron, Consolidation Coal, Clinchfield, Old Ben, Hudson's Bay, U. S. Gypsum, New Jersey Zinc, Homestake, American Smelting, National Lead, etc. USE MAGIC LENS TISSUE.

A MILL?

Rayonier, Forstmann, General Foods, General Mills, Gair, Springs Cotton, U. S. Steel, Youngstown, Bethlehem, Inland, Hercules Powder, Universal Atlas Cement, International Paper, etc. USE MAGIC LENS TISSUE.

A PROCESSING PLANT?

Allied Chemical, Westvaco, Monsanto, Lilly, Celanese, Reigel, P. & G., Jergens, Mathieson, Koppers, Ansul, American Viscose, Amalgamated Leather, Staley, Schenley, National Distillers, etc. USE MAGIC LENS TISSUE.

A PRECISION PRODUCER?

I.B.M., Remington-Rand, Sperry, Winchester Arms, Underwood, Gamewell, Marlin-Rockwell, Fairchild, U. S. Automatic Corp., United Shoe Machinery, DuMont, Zenith, S.K.F., Sylvania, Western Electric, R.C.A., etc. USE MAGIC LENS TISSUE.

A LABORATORY?

Hanford Atomic Laboratories, Knolls, Argonne, Wright Field, Bell Telephone, U. S. Navy, Bureau of Ordnance, American Cyanamid, Hooker Electrochemical, U. S. Testing, Miles, Parke-Davis, etc. USE MAGIC LENS TISSUE.

THE BEST METHOD —BUY TODAY

what such users save

IN ACCIDENTS, POOR PRODUCTION, TIME AND MONEY

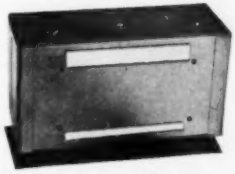
you can save

Science's answer to foul sight. For every safety and production man and every insurance company knows goggles and glasses stay dirty, dangerous and inefficient **unless you make it easy as possible** for workmen to keep them crystal-clear.

Official government statistics estimate poor-seeing holds back production and inspections anywhere from 25 to 40%. Say goodbye to this costly problem. MAGIC LENS TISSUE deposits a protecting silicone film which instantly makes goggles and glasses sparkle and preserves clear vision like magic. Used because it is easy to use—easy as lifting your finger.

Each sheet is 50% larger than usual . . . **yet it costs you less.** Each refill carton contains 6 instantly Ready-to-Use packets (800 interfolded jumbo-sized superstrong sheets per packet) at only $8.40 per carton. No waste. No fluid. Nothing to squirt. No cumbersome cabinet or complicated Dispenser. And no other cleaning station has our SELF-MOUNTING feature. The compact, SELF-MOUNTING Dispenser, not much bigger than a man's fists, costs only $2.50. All prices F.O.B. our factories. Write us or order through your Safety Supplies Jobber today. Save time, trouble, money and many a disaster. Complete your simple installations NOW.

NO SCREWS OR DRILLS NEEDED... JUST STICK IT TO THE WALL



Exclusive feature! Notice Pre-set Adhesive Mounting Strips on back of Dispenser. Absolutely hold to machinery, metal, wood, glass, tile, plaster walls or any smooth surface. No screws, nails, hammering or drilling. No skilled labor, time, trouble or installation cost. Instantly installed anyplace.

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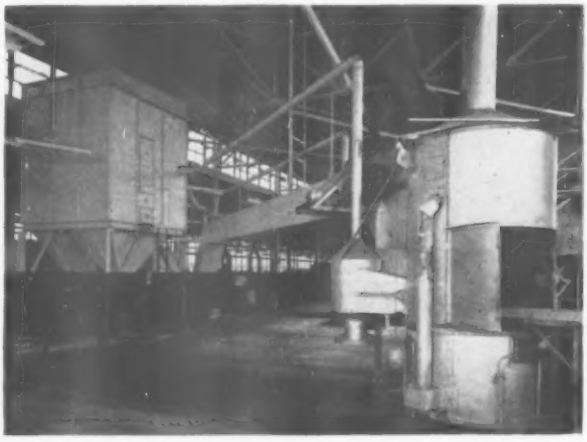
SILICONE TREATED
The Silicone Paper Company of America, Inc.
The World's Largest Producer of Silicone Papers
Interfolded sheets Flat sheets Rolls
75 East 45 Street, New York 17, N.Y.

Keeping Lead Out of the Air

Battery plate-cutting machine at Willard Storage Battery Company's Memphis plant. Note both overhead hood and duct work to under-floor pit where high air velocities are maintained to assure efficient job of dust collection. Scrap pieces are accumulated in pit.

Dust collector which ventilates all three operations in manufacture of storage batteries. Conveyor housing is shown in foreground with duct work which ventilates it. Dust is emptied out of hoppers through tight cylindrical canvas tubes which are clamped to cylindrical parts of hoppers. Collector is equipped with 2,115 feet of cotton sateen cloth in form of tubes.

Refining kettle with hood enclosure around conveyor discharge. Note small attached exhausting hood for dross collection. Scrap and pig lead are remelted in this kettle in preparation for use in molding operations. Conveyor housing and ventilation work leading to dust collector are visible in background. Stack atop refining kettle carries no lead oxide fume but rather removes to atmosphere combustion products from gas fire heating unit.



LEAD OXIDE dust and fume have long been problems for storage battery plants. Much engineering research and experience have gone into the designing of exhaust ventilation systems and strict medical supervision of workers is also important in the health and safety program.

Much progress in the control of health hazards has been made by the Willard Storage Battery Company. All battery-manufacturing operations in four of their plants are ventilated by well-designed hoods. These corral the dusty air and pass it to efficient cloth-type

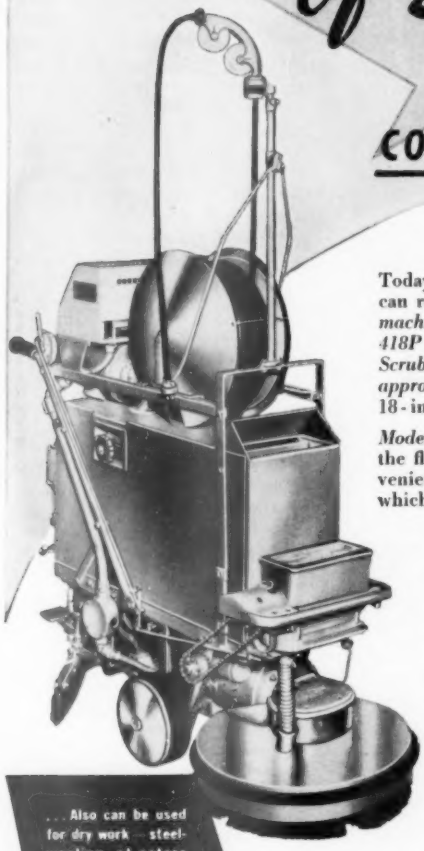
—*To page 68*

SMALL-AREA BUILDINGS...

Save 2/3 of Every Hour of Scrubbing Time

WITH A

COMBINATION SCRUBBER-VAC!



...Also can be used for dry work — steel-wooling, et cetera

Today, even buildings with but 2,000 to 15,000 sq. ft. of floor space can reap the labor-saving, cost-reducing benefits of *combination-machine-scrubbing.* Here's a *Combination Scrubber-Vac, Model 418P* at left, that's specially designed for such buildings. This *Scrubber-Vac,* which has an 18-inch brush ring, cleans floors in *approximately one-third the time* required with a conventional 18-inch machine and separate vac unit.

Model 418P applies the cleanser, scrubs, and picks up (damp-dries the floor) — *all in one operation!* Maintenance men like the convenience of working with this single unit... the thoroughness with which it cleans... and the features that make the machine simple to operate. It's *self-propelled,* and has a *positive* clutch. There are no switches to set for *fast* or *slow*—slight pressure of the hand on clutch lever adjusts speed to desired rate. The powerful vac performs efficiently and quietly. (Powder dispenser is optional.) Compactly built, the *418P* also serves advantageously in larger buildings for the care of floors in narrow aisles and congested areas.

Finnell makes *Scrubber-Vac Machines* for small, vast, and intermediate operations, and in *self-powered* as well as *electric* models. From this complete line, you can choose the size and model that's exactly right for *your* job (no need to *over-buy* or *under-buy*). It's also good to know that you can lease or purchase a *Scrubber-Vac,* and that *there's a Finnell man nearby* to help train your maintenance operators in the proper use of the machine and to make periodic check-ups. For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 2206 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

Conserve Manpower with Completely Mechanized Scrubbing

FINNELL SYSTEM, INC.

Originators of Power Scrubbing and Polishing Machines

Everything for Floor Care — FINNELL

BRANCHES IN ALL PRINCIPAL CITIES

He scoffed at safety breathing equipment . . .

. . but he finished the job wearing a

Scott Air-Pak

(TRADE MARK)

"Scott Air-Pak GIVES ME PLENTY OF AIR, KEEPS ME FEELING COOL INSIDE HOT TANKS!"

An Eastern dye plant needed a painting job done on the inside of a large tank. Although the paint was of a particularly obnoxious compound, the man hired for the job scoffed at the offer of safety breathing equipment. He entered the tank, only to stay inside for six minutes. Making a second attempt to paint the interior without protection, he lasted only one-half minute. The third time he put on a SCOTT AIR-PAK with a hose attached to an air cylinder and stayed in the tank for *three hours*, completing the entire job. Questioned as to SCOTT AIR-PAK's operation, he said "I never knew that working inside of a hot tank could be so cool and comfortable — and safe. I'm taking no more chances!"

Hundreds of other industrial plants throughout the country have discovered that using SCOTT AIR-PAKS is the safest, most efficient way to complete work in hazardous atmospheres quickly, easily, economically.

ESTABLISHED IN 1932

Scott

FOR SAFETY - FOR SERVICE

Call in your Safety Equipment Dealer or
WRITE TODAY
for full information.

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SCOTT AVIATION CORP.

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CANADA: SAFETY SUPPLY CO., TORONTO — BRANCHES IN ALL PRINCIPAL CITIES

EXPORT: SOUTHERN OXYGEN CO., 157 Chambers Street, New York 7, N. Y.

Yes, There's a Town Named "Accident"

ON HIGHWAY 219 in the northwest corner of Maryland is a little community of 236 souls burdened with the unpleasant name of Accident. It was founded some 200 years ago on a grant of land from King George II. The terms of the grant allowed the grantee, George Deakins, to pick the location of the 600 acres anywhere in western Maryland.

According to local tradition, Deakins sent out two surveys, independently, to select the site. The remarkable fact is that these two groups, without knowledge of the other's activities, selected the same tract of land, starting at the same "tall oak tree." The plot was registered as "The Accident Tract," hence the name of the town, "Accident, Maryland." At that time accidents were quite generally regarded as acts of God and there was nothing opprobrious about the name.

Always looking for a novel approach in announcing the annual October No-Accident Campaign, the New England Electric System hit upon the idea of having the announcements mailed to homes of employees with this unusual postmark. This was done with the cooperation of Postmaster Haenftling of Accident.

The envelope carries a map of this section of Maryland with the immediate vicinity of Accident blown up as seen through a magnifying glass.

The announcement, sent out by the general safety committee, carries a brief story of the town and concludes:

"The only place for an accident is on a postmark far away from home."

It's easier to do a job right, than to explain why you didn't.

The NEW NEO CREPE SOLES

Light Weight
Non-Slip
Cushions the Feet
Not Affected By—
Oil • Heat • Cold
Grease • Acids
Caustics • Gasoline
Won't Pick Up Metal Chips
Water Proof

A Product of Importance to All Men Interested in SAFETY!

We, at Gro-Cord Rubber Co. firmly believe that the new NEO-CREPE sole, made of du Pont Neoprene, is the finest all-around industrial sole ever developed. We say this because thorough testing under actual working conditions has proven the following:

NEO-CREPES are extremely slip resistant under practically all floor conditions. This is vital in reducing accidents caused by slipping.

NEO-CREPES are comfortable. They are springy but not mushy, tough but very pliable, and protect the feet from bumps and bruises caused by stepping on hard, lumpy objects.

NEO-CREPES are the lightest weight safety soles ever produced by Gro-Cord Rubber Co. The feet of your workmen will be free from fatigue at the end of the day.

Twenty-five years of "know how" in safety sole manufacturing has gone into this product. All of the known faults that have come to our attention in the past years have been eliminated in NEO-CREPES. So we say to you, "Do all you can to get your men to wear NEO-CREPE soled shoes, for once they walk on NEO-CREPES they'll always walk on NEO-CREPES."

GRO-CORD RUBBER CO.
LIMA, OHIO

Canadian Plant
GRO-CORD RUBBER CO. of CANADA LTD.
Tillsonburg, Ontario

Accidents Fewer in Britain's Industries

By RAY BOYFIELD

BIG IMPROVEMENTS in Britain's industrial accident rate have been achieved in recent years. Since the peak year of 1942 there has been a steady decrease in the accident rate until, in 1950, the figure for all employees was 25 accidents per 1,000 workers. The proportion for women and girls was 11 and for men 33; the greatest improvement was achieved for boys where the proportion was reduced, in these eight years, from 59 to 29 per 1,000.

These reductions are welcome but the total number of accidents is still too high. More days' work and wages are lost through them than by industrial disputes. In 1950 (the final figures for 1951 are not yet available) there were 170,000 accidents (leading to three or more days absence from work) reported among about seven million factory workers (including the shipbuilding, gas, electricity and steel industries).

These accidents led to 500 deaths. In the whole of industry there were over 1,000 more fatalities—546 in mines and quarries and 504 chiefly in building, railways and docks. For purposes of comparison the number of persons injured on Britain's roads last year was 216,493, of whom 5,350 died: these figures are again lower than those before the war.

This improvement in factory safety has been brought about by a combination of effort between Government, employers and workers. For its part the Government has laid down rules about safety, health and welfare in Factories Acts and makes regulations from time to time prescribing precautions for particular kinds of work or plants with special problems.

For instance, every part of transmission machinery and every dangerous part of other machinery must be securely fenced. Fixed vessels or pits containing scalding, corrosive or poisonous liquids must be fenced or covered. New power machinery must not be sold or let on hire unless certain parts are effectively guarded.

Regulations in other countries are not always so strict on this point and a recent report of Britain's Chief Inspector of Factories referred to the imperfections of imported hosiery machinery. Progress, however, is being made by explaining to foreign manufacturers what United Kingdom standards require. Legislation also provides that young persons must not work certain machines until after stated periods of training and that neither they nor women must clean machinery in motion.

Inspectors have power to enter a factory by day or night and to examine any person in the factory. There are penalties for breaches of safety rules by employers. Such investigations form only part of inspectors' work, for increasing demands are made on them for advice. There is, indeed, a growing willingness to aim at more than the bare legal minimum required.

This positive approach to the problem is fostered by a growing number of joint committees. Some are national, like the official Factory Advisory Board or safety committees in separate industries, and others operate for foundries and paper making and textile mills. These have periodic meetings to review machinery and, where necessary, to draw up new codes of conduct or prepare revised training schemes.

A more recent development has been the forming of Accident Prevention Associations in the larger industrial towns. These societies, composed of management and workers' representatives, hold meetings and visit factories. Such activities encourage members of safety committees in each factory and give higher status to the work of safety officers which more firms are now appointing.

In this way the number of accidents caused through indiscipline is decreasing, but there are still too many cases of injury through removing a guard for fancied ease in working, failing to put on goggles "because the job will only take a few moments" or ignoring some precaution when carrying acids.

In the field of promoting "safety consciousness" lies the greatest hope of further progress. Proof that care is growing is shown by the marked annual decrease in the number of cases of sepsis. Greater attention is being paid to prompt treatment of minor injuries and to improved washing and first-aid facilities.

RAY BOYFIELD *is Secretary, Organization Department, Britain's Trades Union Congress.*

Reduce Airfield Noise To Curb Accidents

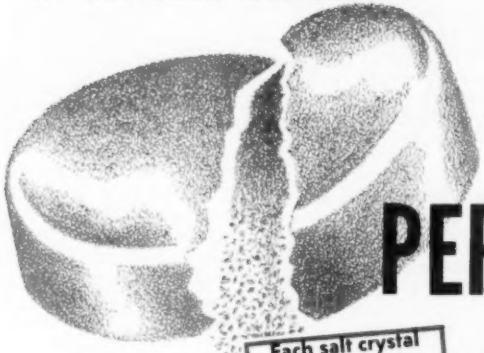
More careful airfield zoning, better regulation of warm-up and maintenance areas and proper master planning of airfield installations are needed to help reduce airplane accidents caused by excessive noise in and around control towers, declared Lt. Colonel Alvin F. Meyer, Jr., of Wright-Patterson Air Force Base, Dayton, Ohio, in a speech before the recent 1952 Industrial Health Conference at Cincinnati.

Colonel Meyer recommended the use of more comfortable individual ear defenders and revealed that pilot studies at Kelly Air Force Base on a series of plastic compounds have indicated that plastic ear plugs can be fabricated inexpensively. "With such devices," he declared, "between 40 to 50 per cent reductions can be effected."

60-second action

without fear of nausea or stomach distress

Sweating in hot weather can cause a tired, listless feeling and make every move an effort. These symptoms are caused by the loss of salt from the system. Salt is lost amazingly fast through perspiration and research has shown that "lassitude" and "loss of will to work" can occur when as little as 10% of the salt in the system is lost. As vigor and vitality go down, the accident rate can go up. Prompt replacement of this salt can quickly restore vigor and vitality and the most satisfactory way of replacing salt in the system is by taking PEP-UP Impregnated Salt Tablets. These tablets are subjected to an exclusive patented process which forms a complete coating around each crystal of salt in each tablet — when swallowed the tablet dissolves slowly, thus avoiding the nausea and digestive disorders usually noticed with the taking of plain salt.



Each salt crystal individually coated

PEP-UP® impregnated salt tablets

release salt immediately!

(Not Enteric Coated)

- Controlled (slow) dissolving eliminates nausea.
- Starts dissolving immediately.
- Dissolves completely in about 100 minutes.
- No delay in getting salt into system.
- Withstands high temperatures and rough handling.
- Can be stored for long periods without deteriorating.
- Will not absorb moisture from air and clog dispensers.
- The Formula used for producing Impregnated Salt Tablets was developed at the United States Naval Medical Research Institute. The tablets meet government specifications for Type III, Class C impregnated salt tablets (specifications set forth in Federal Standard Stock Catalog No. SS-S-31d, Section IV (part 5), dated September 11, 1951).

EXPENDABLE DISPENSER

PEP-UP Impregnated Salt Tablets are packaged in sanitary factory-sealed Dispensers at no extra cost. THROW AWAY DISPENSER WHEN EMPTY. HANG UP A NEW ONE. Save the expense of purchasing, servicing and replacing individual dispensers.

Write for literature and prices

UNITED STATES SAFETY SERVICE CO.

KANSAS CITY 6, MISSOURI · BRANCHES IN PRINCIPAL INDUSTRIAL CITIES

In Canada PARMELEE, LTD. Toronto

Green Cross News . . .

Activities of Local Safety Councils and Chapters

Compiled by TOM A. BURKE
Director of Local Safety Programs, Field Organization, NSC

Eastman Heads Western Region

George D. Eastman, for the past six years chief of police of Seattle, Wash., who has won national recognition for his work in combatting crime and traffic accidents, has been named director of the Western Region of NSC. Eastman resigned as chief on April 30. He will spend a few weeks at headquarters and will assume his new duties in San Francisco on June 1.

The new director is a graduate of Northwestern University Traffic Institute, the nine months' class of 1941-42. At that time he was motorcycle patrolman and accident investigator. He moved up fast through the ranks and in 1946 was appointed chief of police. The same year he was graduated from the F.B.I. National Academy. He holds a degree from the University of Washington.

In his new position Mr. Eastman will be responsible for coordinating, strengthening and increasing all types of safety programs in the Western states, British Columbia, Alaska and Hawaii. Earl F. Campbell, director NSC Field Organization says that no changes are contemplated in the present Western staff.

Conference Procedures Group Meets in Chicago

THE COMMITTEE ON PROCEDURES of the Conferences of Local Safety Organizations will recommend to the NSC the adoption of a Retirement Income Plan for Chapter managers and staff members, to be sponsored by the NSC. The resolution, adopted unanimously at the Procedures Committee meeting in Chicago May 2, will be submitted to the board of directors of NSC at its next meeting.

The comprehensive project which is patterned after a successful plan adopted nationally some years ago for local chamber of commerce executives and their employees, has been worked out after a careful study during the past six months by a joint committee consisting of Managers, Robert B. Leopold, chairman, J. James Ashton, Joseph M. Kaplan, Kenneth R. Miller and Walter D. Ladd, working with Ralph Robinson of the Field Organization and representatives from the trust and insurance interests.

A National Institute for Safety Council Administration is to be conducted in August. A two weeks course was recommended by the Procedures Group and the Institute will be primarily for new managers and assistant managers of NSC Chapters. Instructors will be members of the NSC staff, managers of Chapters convenient to Chicago and experts drawn from organizations and agencies in the Chicago area. The course will be held at NSC headquarters, thus giving opportunity for individual conferences with NSC staff members. It is hoped to make the school an annual project that will supply the knowledge and techniques necessary for successful Chapter management. Every phase of administration will be covered by specialists in various fields. The Institute Committee is headed by J. James Ashton.

A special committee was also

—To page 88

Reading from left to right. George D. Eastman, former chief of police, Seattle, recently appointed manager of the Western Regional office, NSC, San Francisco; Earl F. Campbell, director, Field Organization; President Ned H. Dearborn and Robert R. Snodgrass, Vice-President for Local Safety Organizations, NSC.

WHERE'S THE FIRE?

There are danger spots in every building (yours, too!) where fire is most likely to strike. These spots can be guarded day and night by a Kidde Automatic Fire Extinguishing System.

At the first sign of flame the Kidde system releases carbon dioxide (CO_2) which blankets the fire—literally smothers it instantly. You can protect several spaces with a single Kidde system . . . or have separate protection for such hazards as a dip tank or generator.

With a Kidde System, there is no water damage, no messy residue to ruin costly machinery, electrical equipment or documents. And that means no interruption in production. Find out more about Kidde Fire Protection today. Write to:

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ACCO Registered DUALOC Slings are Lifting Tools

• DUALOC Slings, whether strand-laid or cable-laid, provide the material handling engineer with a tool of known strength and safety factor throughout. The design is modern . . . tested . . . and proved in service.

The DUALOC Ending insures sling strength equal to the FULL catalog strength of the wire rope, and the "Registry" specification requires that all fittings have strength equal to that of the wire rope. These are the basic reasons why ACCO *Registered* DUALOC Slings have set industrial sling standards.

You can get DUALOC Slings and Fittings from the stock of your ACCO Sling distributor. See him today or write our nearest district office for his name.

ACCO *Trade Mark Registered Patent No. 2463199

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AMERICAN CHAIN & CABLE

TRADE MARK

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ACCO Registered DUALOC Slings

COMING EVENTS

In the Field of Safety

June 2-4, Washington, D. C.
President's Conference on Industrial Safety. (Department of Labor Bldg.) William L. Connolly, chairman, Coordinating Committee, Bureau of Labor Standards, U. S. Department of Labor, Washington 25, D. C.

June 16-18, Long Beach, Calif.
Western Safety Conference (Wilton Hotel). Joseph M. Kaplan, secretary-manager, Greater Los Angeles Chapter, National Safety Council, Suite 730, 610 South Main St., Los Angeles 14, Calif.

Sept. 11-12, York Harbor, Me.
Twenty-fifth Annual Maine State Safety Conference. (Marshall House). A. F. Minchin, secretary, Industrial Safety Division, Department of Labor and Industry, Augusta, Me.

Sept. 16-18, Cleveland, Ohio
Fourteenth Annual Ohio State Safety Conference. (Hotel Carter). Carl L. Smith, secretary-treasurer, Ohio State Safety Council, 2073 E. 9th St., Cleveland 15, Ohio.

Oct. 20-24, Chicago
Fortieth National Safety Congress and Exposition. (Conrad Hilton Hotel). R. L. Forney, general secretary, National Safety Council, 425 N. Michigan Ave., Chicago 11.

Nov. 12-13, Cincinnati, Ohio
Second Annual Greater Cincinnati Safety Council. (Sheraton-Gibson Hotel). Kenneth R. Miller, executive director, Greater Cincinnati Safety Council, 1203 Federal Reserve Bank Bldg., Fourth and Race Sts., Cincinnati, Ohio.

ASTM to Hold 50th Anniversary Meeting

TO ACCOMMODATE the large number of technical papers on the properties and testing of materials which are to be presented at this 50th Anniversary Meeting in New York, June 23-27, the American Society for Testing Materials has already scheduled 30 technical sessions.

In addition to these there will be in progress throughout the week the Society's 10th Exhibit of Testing Apparatus and Laboratory

Supplies and its 8th Photographic Exhibit. Headquarters will be at the Hotels Statler and New Yorker. All exhibits will be at the Statler.

At the annual dinner, Wednesday, June 25, the chief speaker will be Dr. Detlev W. Bronk, president of the National Academy of Sciences and head of Johns Hopkins University.

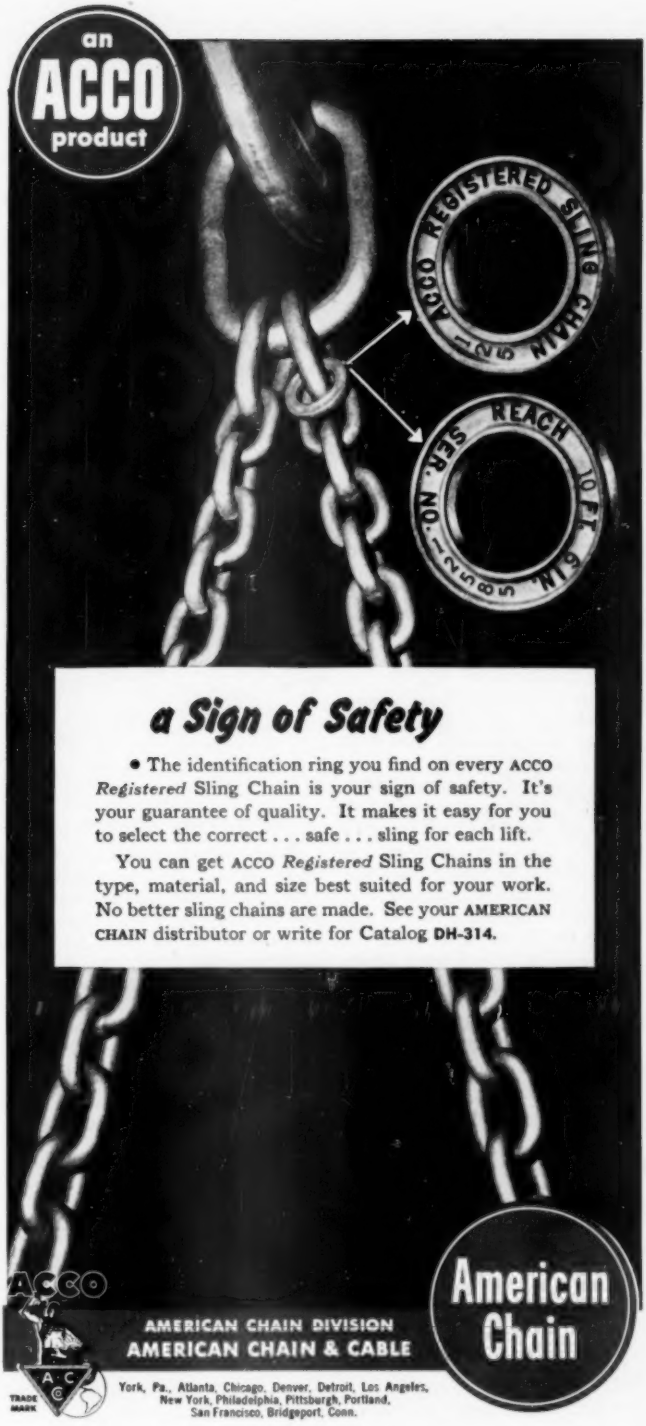
The President's Luncheon, June 24, will include the annual address of ASTM President T. S. Fuller, General Electric Co., Schenectady; and short addresses of greetings from Dr. R. E. Zimmerman, Vice-President, United States Steel Co., speaking for the American engineering and technical groups and associations, and A. Caquot, French scientist and president of the International Organization for Standardization, who will respond for the foreign delegation at the meeting.

Throughout the entire meeting beginning Sunday, June 22, there will be hundreds of meetings of technical committees. These are of more than usual significance because 1952 is the year when the triennial Book of ASTM Standards is issued and there will be intensive efforts to bring the more than 1800 existing standards right up to date and to complete many new specifications and tests that are under consideration in the committees.

Planning Factories For Women

SOME WOMEN don't like to work in industry because, they claim, most of the factories were designed for men. These women have found work benches too high, tool handles too heavy, reaching distances to machine parts too great.

But that is being changed, according to officials of the 1952 Industrial Health Conference, recently held in Cincinnati. Recommendations by plant industrial hygienists and physicians are being followed and women-sized facilities are expected to result. This will reduce fatigue and other factors that cut down the working efficiency of women in industry, these officials say.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You can get ACCO Registered Sling Chains in the type, material, and size best suited for your work. No better sling chains are made. See your AMERICAN CHAIN distributor or write for Catalog DH-314.
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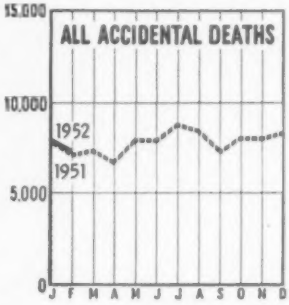
THE ACCIDENT BAROMETER

Prepared by the Statistical Division, National Safety Council

ACCIDENTAL DEATHS in February totalled approximately 7,300, an increase of 3 per cent over the death total for February, 1951. Most of the increase occurred in deaths from motor-vehicle accidents, but deaths from occupational accidents also were more numerous. There was a small decrease in home accident fatalities. Deaths from public non-motor-vehicle accidents numbered about the same as in February last year.

The total for the two months was 15,200, an increase of 2 per cent over last year's comparable total of 14,900. Increases were recorded in deaths from motor-vehicle, occupational and public non-motor-vehicle accidents. Home accident fatalities showed no change from 1951.



	1952	1951	Change
February	7,300	7,100	+3%
Two Months	15,200	14,900	+2%

Motor-Vehicle Deaths

The February total of motor-vehicle deaths was 2,530, an increase of 12 per cent over February last year.

Deaths for the two months totalled 5,230, an increase of 2 per cent over the 1951 total of 5,110. The two-month death rate per 100,000,000 vehicle miles was 6.7, a reduction of 7 per cent from the 1951 comparable rate of 7.2.

Of the 46 states reporting for two months, 20 had fewer deaths than in 1951, 2 had the same number and 24 had more deaths. Reporting cities with populations over 10,000 showed an increase of 8 per cent in February, but a reduction of 5 per cent for the first two months of the year.

Regional changes from 1951 in the two-month death totals were:

North Atlantic	+ 2%
South Atlantic	+ 5%
North Central	— 4%
South Central	+11%
Mountain	— 5%
Pacific	+ 1%

Occupational Accidents

Deaths from occupational accidents numbered approximately 1,400, an increase of 100 deaths over February last year. The two-month death total was about 2,900, an increase of 4 per cent over 2,800 in 1951.

The February frequency rate per million man-hours in seventeen accident prevention contests conducted by the National Safety Council was 6.55, a reduction of 11 per cent from last year. The two-month rate also decreased 11 per cent—from 7.36 in 1951 to 6.56 in 1952. The February rate for community council inter-plant contests was 7.47, a decrease of 7 per cent from last year. The two-month rate was 7.89, a reduction of 5 per cent.

Public Deaths

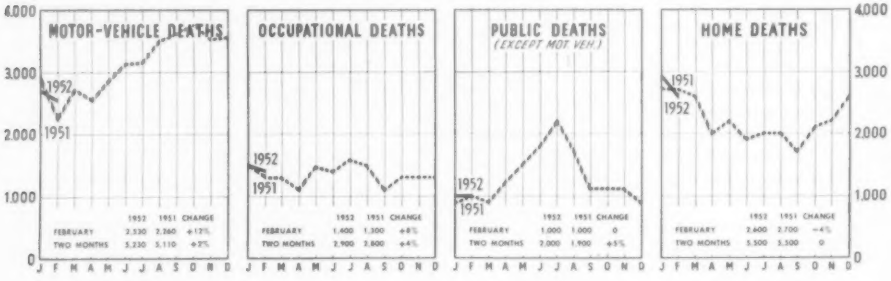
There were approximately 1,000 deaths from public non-motor-vehicle accidents in February, the same as in February 1951.

Deaths during the two months numbered about 2,000, an increase of 5 per cent over last year. Sizable increases were recorded in deaths from falls and firearms accidents. There were moderate reductions in fatal burns and drownings. Most of the increase occurred among persons 25 to 44 years old and children under 5 years of age. Deaths of young people 15 to 24 years old and persons 65 years and over also were more numerous than last year.

Home Deaths

February deaths from home accidents totalled approximately 2,600, a reduction of 4 per cent from last year.

Deaths for the two months totalled 5,500—the same as in 1951. Increases in deaths from burns, firearms accidents and unclassified home accidents were offset by decreases in deaths from poisonings, mechanical suffocation and falls. There was a moderate reduction in deaths of persons 65 years and over. All other age groups showed some increase.



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YOU'RE SAFE WHEN YOU HAVE LEGGE TO STAND ON

LEGGE SYSTEM
of Safety Floor Maintenance

It took a bad prattfall to get Mr. Higby to investigate the LEGGE System of Safety Floor Maintenance.

This is what he discovered:

1. Polished floors don't *have* to be slippery.

2. LEGGE Safety floor polishes and cleaners keep floors handsomely groomed *longer*.

3. They reduce slip-accidents by as much as *98%*. And buffing actually *increases* the slip-resistance of LEGGE materials.

4. LEGGE Maintenance saves up to *50%* on labor, *25%* on materials.

Our trained Safety Engineers work right with your cleaning crews, show them what products to use and how to apply them most effectively.

We'd like discussing your floor problems with you while you're in an upright position. Don't wait to "do a Mr. Higby" before calling us. WALTER G. LEGGE COMPANY, INC., 101 Park Ave., New York 17, N. Y. Branch offices in principal cities. In Toronto — J. W. Turner Co.

Walter G. Legge Company, Inc. N-6
101 Park Ave., New York 17, N. Y.

( ) I'd like to know what Legge Safety Products can do for my floors. I have approximately _____ sq. ft. of _____ (composition)

( ) Send me your FREE "Mr. Higby" booklet.

Name _____

Firm _____

Street _____

City _____ Zone ____ State ____

General view of the Fifth Annual First Aid Meet at Oak Ridge, Tenn.

A Big Event in Oak Ridge

OAK RIDGE, Tennessee, each year is the site of one of the largest industrial first aid contests held in this country. This competitive meet is sponsored by Carbide and Carbon Chemicals Company, operator of the three Atomic Energy Commission facilities in Oak Ridge.

As in other programs of this kind, success can be attained only with enthusiastic support and direction from top management. Clark E. Center, Carbide's resident general manager in Oak Ridge, has long been an exponent of industrial first aid training, and once captained a first aid team at Carbide's chemical works in South Charleston, W. Va. Carbide's management has learned that competition and public recognition coming from public first aid meets is one of the most effective ways of generating active employee participation in a first aid program. This in turn results in an unusually high percentage of employees trained in first aid methods distributed throughout the plant facilities operated by Carbide.

To evaluate all of the benefits derived from this situation would be nearly impossible. Not only are the results of personal injury accidents minimized when people on the spot know how to handle injuries, but people trained in first aid are more alert to discover sources of possible injury and arrange for their correction. The effect of such a program on safety performance is indicated by the fact that the K-25 gaseous diffusion plant, operated by Carbide in Oak Ridge, recently amassed over 2,700,000 man hours of continuous operation without a disabling injury.

A plant first aid program is intended to supplement rather than supplant the industrial medical program. In Oak Ridge, Carbide maintains modern medical facilities in each plant, staffed by experienced physicians, nurses and technicians. Of primary importance is the fact that such training broadens out to the home, the highway and the community, thus tending to reduce the effects of off-the-job accidents. It also helps to make possible immediate assistance in cases of injury, and thus tends to minimize the effects of industrial injuries and to reduce accident severity.

In 1943, when Carbide started building its organization for operating the gaseous diffusion plant in Oak Ridge, a first aid training program was included in the operating procedures. At that time, the U. S. Bureau of Mines was asked to help, and provided personnel for the training of instructors. This assistance was extremely effective, and an extensive cooperative training program was later established between Carbide and the Bureau of Mines. Under this program, Carbide's instructors are designated as representatives of the Bureau of Mines for purposes of instructing, examining and recommending trainees for Bu-

—*To page 104*

for industrial *First Aid*

MERCUROCHROME*

(H. W. & D. BRAND OF MERBROMIN, DIBROMOXYMERCURIFLUORESCEIN-SODIUM)

Do not neglect wounds, however small; even scratches and small cuts may become infected if they are not promptly and properly treated.

'Mercurochrome' (H.W.&D. brand of merbromin, dibromoxymercurifluorescein-sodium) is one of the best antiseptics for first aid use. It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association for this purpose.

The 2% aqueous solution is not irritating or toxic in wounds; minor injuries are reported more promptly when 'Mercurochrome' is the routine antiseptic, because treatment is not painful.

'Mercurochrome' solution keeps indefinitely; the color shows where it has been applied.

Physicians have used 'Mercurochrome' for more than 28 years.

Be sure to include 'Mercurochrome' in your first aid supplies.

* Reg. U. S. Pat. Off

* Described in New and Non-official Remedies (1950) by the Council on Pharmacy and Chemistry of the American Medical Association.

HYNSON, WESTCOTT & DUNNING, INC.

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The Safety Library

Books, Pamphlets and Periodicals of Interest to Safety Men

BOOKS AND PAMPHLETS

Atmospheric Pollution

Air Pollution Abatement Manual. Preface and Outline (Manual Sheet P-1) 6. 15c; Legislative Requirements Chapter 4 (Manual Sheet P-5) 19 p. 30c. Published by Manufacturing Chemists Association, 246 Woodward Bldg., Washington 5, D. C., 1952.

Chemicals

Acetuldehyde. Published by Manufacturing Chemists Association, 246 Woodward Bldg., Washington 5, D. C. 1952. 15 p. Price 30c. (Chemical Safety Data Sheet SD-43.)

Ammonium Dichromate. Published by Manufacturing Chemists Association, 246 Woodward Bldg., Washington 5, D. C. 1952. 12 p. Price 25c. (Chemical Safety Data Sheet SD-45.)

Chronic Acid. Published by Manufacturing Chemists Association, 246 Woodward Bldg., Washington 5, D. C. 1952. 12 p. Price 25c. (Chemical Safety Data Sheet SD-44.)

Disaster Plans

Before Disaster Strikes. Published by Association of Casualty and Surety Companies, 60 John St., New York 38, N. Y. 1952. 20 p. Free.

Fire Protection

Fire Resistance of Shutters for Moving-Stairway Opening. By Noland D. Mitchell and others. Published by National Bureau of Standards. 1952. 9 p. For sale by the Superintendent of Documents, Washington 25, D. C. Price 10c. (Building Materials and Structures Report 129.)

First Aid

Standard Procedure for First Aid Workers in Industry. Published by American Mutual Liability Insurance Co., 142 Berkeley St., Boston, Mass. 1952. 25 p. Free.

Mines

Falls of Roofs The No. 1 Killer at Bituminous Coal Mines, 1951. Published by U. S. Bureau of Mines, Washington 25, D. C. 1952. 10 p. Free. (HSS No. 406.)

Injury Experience in Coal Mining, 1948. Published by U. S. Bureau of Mines. 1952. 109 p. For sale by the Superintendent of Documents, Washington 25, D. C. Price 45c. (Bulletin No. 509, Bureau of Mines.)

Off-the-Job Safety

Off-the-Job Accidents and You. Published by Accident Prevention Department, Association of Casualty and Surety Companies, 60 John St., New York 38, N. Y. 1952. 13 p. Free.

Visual Education

Fire Prevention Films. Published by National Board of Fire Underwriters, 85 John St., New York 38, N. Y. 1952. 5 p. Free.

MAGAZINE ARTICLES

Accident Statistics

Preliminary Estimate of Work Injuries in 1951. Monthly Labor Review, March 1952. p. 271.

Air Pollution

Determination of Gaseous Air Pollution by Carbon Absorption. By Amos Turk and others. American Industrial Hygiene Association, Quarterly, March 1952. p. 23.

Eyes

Inter-State Iron Co's. Sight Screening Program Strives for: 1. Visual Health of Employees; 2. 100 Per Cent Use of Safety Goggles. By H. W. Gillespie. Engineering and Mining Journal, April 1952. p. 96.

Commercial Vehicles

Safety Rules Save Lives, Money, in Operating Big Trucks. By G. G. Grieve. Engineering and Mining Journal, April 1952. p. 94.

Construction

Previewing New Construction. A Technique for the Control of Health and Safety Hazards. By Leonard Greenburg. American Industrial Hygiene Association Quarterly, March 1952. p. 33.

Fire Protection

Fire Prevention and Fire Fighting in Industry. By Colonel Marwells, Occupational Safety and Health, Oct.-Dec. 1951. p. 153.

Health

Control of Health Hazards in the Operation of Metal Degressers. By John B. Skinner. American Industrial Hygiene Association Quarterly, March 1952, p. 11.

Public Health Service Program of Occupational Health. By John Petsko. Monthly Labor Review, March 1952. p. 253.

Ohio, Indiana and Illinois Working to Check Further Spread of Anthrax. National Provisioner, April 5, 1952. p. 23.

Mines

Operating Efficiency and Safety Incorporated in Plant Design. By Don C. Jones, Mechanization, March, 1952. p. 93.

Roof Bolt Testing Ground. By Albert M. Keenan. Mechanization, March 1952. p. 107.

Noise

Industrial Loss of Hearing: Medical Aspects. By C. Stewart Nash, Industrial Medicine and Surgery, April 1952. p. 171.

The Noise Problem in Industry. By Herbert T. Walworth. American Industrial Hygiene Association Quarterly. March 1952. p. 17.

Standards of Noise Tolerance. By James H. Sterner. Industrial Medicine and Surgery, April 1952, p. 162.

Ultra Sound and Industrial Medicine. By Horace O. Parracts, Industrial Medicine and Surgery, April 1952. p. 156.

Pipe Lines

Safety Rules for Pipe-Liners. By E. G. Pierce, Loss Control, Jan. 1952, p. 5.

Power Presses

Safety Devices for Dies and Machines. By C. W. Hinman, Modern Machine Shop, April 1952, p. 186.

—To page 88

FogFOAM is discharged directly into flames, smothering fire in seconds.

Plane Crash Fire Controlled in Seconds

. . . with Rockwood-equipped fire truck

When Pratt & Whitney Aircraft division of United Aircraft Corporation decided to design a really outstanding fire truck, they turned to Rockwood for the special fire-fighting equipment needed. The result? A mobile unit that controls aircraft crash fires in seconds.

Two Rockwood FogFOAM Turret Nozzles mounted over the driver's cab are unique features of the unit. They discharge huge quantities of FOAM or FogFOAM into the fire, smothering flaming gasoline and blanketing wreckage. The Rockwood FOAM flows freely at sub-zero temperatures, clings to metal surfaces as an insulator, can be easily washed away after fire is put out.

If crash fires occur, the truck can speed directly to the scene . . . reaching any corner of a 650-acre flying field in one minute. Test fires have been controlled in less than 30 seconds!

Similar equipment is used for fighting gasoline spill fires on city streets, refineries, industrial plants, etc.

Get the Complete Facts! Rockwood's contribution to the Pratt & Whitney Aircraft truck is but one of many successful applications of Rockwood fire-fighting equipment. All types of equipment to combat all types of fires are available at Rockwood — or made to individual requirements. For complete details, send for your copy of our new illustrated catalog.

ROCKWOOD Type FFF FogFOAM Turret Nozzle can be manually operated from roof of cab. Other types of Rockwood Turrets can be hydraulically operated from within cab. Provides 4 different types of discharge: FogFOAM, solid FOAM stream, WaterFOG, and solid water stream.

ROCKWOOD Under Truck Nozzles and Ground Sweep Nozzles protect front and under parts of fire trucks. Also puts out fires in path of truck. Discharges FogFOAM or WaterFOG.

ROCKWOOD Hand Lines utilize Rockwood SG Type Nozzles. They discharge High Velocity WaterFOG, FogFOAM, Solid FOAM Stream and Straight Water Stream and are available in 1" sizes only.

ROCKWOOD

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72 HARLOW ST., WORCESTER 5, MASS.

Benj. O'Shea, NSC Trustee, Dies

BENJAMIN O'SHEA, a director and member of the Executive committee of Union Carbide & Carbon Corporation, and a Trustee of the National Safety Council, died May 2 at Lester Manor, Va., after a brief illness. He was 75 years old.

Mr. O'Shea played a large part in helping to form Union Carbide and Carbon Corporation in 1917. His early business career was with Peoples Gas Light and Coke Company. He joined Union Carbide Company in Chicago, in 1906, and came to New York as an executive of the company when it joined with other companies to form the Corporation.

He was one of the pioneers in developing the uses of acetylene gas, and helped form the International Acetylene Association in 1898. Later, much of his experience centered in organizing and directing the corporation's companies that represent the industrial gases and metallurgical groups. This experience also projected Mr. O'Shea into the international picture in the procurement of such alloying metals as manganese.

Mr. O'Shea became president of Union Carbide and Carbon Corporation in 1941, in which capacity he served until 1944 when be became chairman of the board. He retired from the chairmanship in 1946. He was also a former trustee of the Hanover Bank.

Active in religious circles, Mr. O'Shea was a member of the Sovereign Order of the Knights of Malta. He was a member of the Cardinal's Committee of the Catholic Charities of New York, and of the Holy Family Church, New Rochelle, N. Y.

Benjamin O'Shea

His clubs included the Links, Cloud, and Uptown Clubs of New York City, the Blindbrook Club, Port Chester, the Wykagyl Country Club, New Rochelle and the Westchester Country Club.

Surviving are his widow, the former Helen Martha Egan, of New Rochelle; two daughters, Mrs. Robert Romer, and Mrs. J. G. Romer both of New Rochelle; and seven grandchildren.

Burial was in Pleasantville, N. Y.

President's Conference Meets June 2-4 in Washington, D. C.

THE SPOTLIGHT will be on the national program to reduce industrial deaths and accidents to conserve manpower for defense production when President Truman opens the 1952 session of the President's Conference on Industrial Safety in Washington, D. C., June 2.

The conference, organized by the U. S. Department of Labor in 1948 at the request of the President, brings together approximately 1,200 representatives of Federal and State governments, leaders from industry, labor, education and civic groups. Sessions will be held June 2, 3 and 4 in the Departmental Auditorium.

Secretary of Labor Maurice J. Tobin, general chairman of the Conference, will welcome the delegates at 11 a. m., June 2, and will introduce the President.

The first-day session will hear an address by Secretary Tobin on the subject, "Safety on Every Job." Ned H. Dearborn, President of the National Safety Council will discuss "Safety for Small Business." The first-day session will conclude with a workshop discussion outlining progress made during 1951 by Governor's Conferences on Industrial Safety.

Individual committee meetings will begin the second-day meeting, followed by a general discussion of "Success Stories in Safety Services - Trade Associations."

Harry W. Anderson, vice-president, General Motors Corporation, will speak on the subject of "Accident Costs."

"Public Relations Aspects of Industrial Safety" will be discussed by J. Carlisle MacDonald, assistant chairman of the board, United States Steel Corporation. A workshop discussion, "How Labor Unions Can Increase Their Safety Services" will follow. An address, "Stimulate Public Employee Safety" by Milton M. Bowman, Commissioner of Employees Accident Control, City of Cleveland, will conclude the second session.

A workshop discussion of the problems of machine guarding followed by a discussion titled, "Training Tomorrow's Engineers for Safety" will highlight the concluding session. Presentation of special awards of merit to committee chairmen will follow.

Aiding Secretary Tobin in the Conference Organization are William L. Connolly, director of the Bureau of Labor Standards, U. S. Department of Labor, chairman; Vincent P. Ahern, executive secretary, National Sand and Gravel Association, executive director, and Charles F. Alexander, manager, Industrial Department, National Safety Council, special consultant to the executive director.

New MSCO protection for field personnel...

to prevent discomfort . . . inefficiency . . . accidents caused by mosquitoes, chiggers, other insects . . . poison ivy, oak, sumac

Now—when field operations take your men into mosquito-ridden areas—you can provide them a *proved* safeguard.

Famous Lotshaw's PELLENT, now packaged exclusively by MSco under the Unit System, keeps mosquitoes, chiggers and other insects away for hours.

No more lost time fighting mosquitoes . . . no more swatting around in dangerous quarters . . . no more irritating welts and itching to distract workers.

An application of PELLENT, which lasts at least six hours, *costs less than 2¢*. Workers prefer PELLENT because it is a *cream*, not a liquid . . . doesn't come off easily with perspiration . . . no stickiness . . . pleasant aroma . . . easy to apply, just rub it on.

Protect your workers, too, with MSco Poison Ivy Ointment—the first of its kind in the Unit System—proved in the field with over seven years of case history. Use it as a preventative or a cure.

Be sure your first aid kits are equipped with these MSco field units—PELLENT and Poison Ivy Ointment. See your distributor for complete details, or write for literature.

OUT IN THE OIL FIELDS, along pipe lines—wherever mosquitoes abound—PELLENT is effective longer, gives better protection.

CONSTRUCTION CREWS, lumbermen, others in field operations are safer when protected with PELLENT and MSco Poison Ivy Ointment.

UTILITY WORKERS, railway and highway maintenance crews and other workers do their jobs better, more comfortably with MSco protection.

MSCO

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FOR DISTINGUISHED SERVICE

National Safety Council Awards for Outstanding Records

THREE types of awards for outstanding performances in accident prevention are awarded by the National Safety Council. These awards are made automatically on the basis of reports submitted to the Council, according to the plan recently adopted by the Industrial Conference and the Board of Directors.

The three types of awards are:

1. The AWARD OF HONOR, the highest award, replaces the Distinguished Service Award. It goes to companies which complete 3,000,000 man-hours without a disabling injury, also to those which meet rigorous statistical standards for safety work, although a no-accident record is not maintained.

2. THE AWARD OF MERIT has similar but less severe requirements. The number of accident-free man-hours needed to qualify is between 1,000,000 and 3,000,000 and the standards for non-perfect records are proportionately less exacting.

3. THE CERTIFICATE OF COMMENDATION is given only for no-accident records for a period covering one or more full calendar years, and involving exposure of 200,000 to 1,000,000 man-hours.

Awards are made automatically for records established within a calendar year, or may be made on special application where consecutive months of two years are involved.

Publication of awards under this plan succeeds "The Honor Roll" department formerly published in NATIONAL SAFETY NEWS.

USAF WINS FOURTH AWARD. For the second consecutive year and the fourth time in eight years, National Safety Council has presented its highest award to the United States Air Force. The AWARD OF HONOR for an average 5.2 reduction in the Air Force ground accident frequency rate in 1951 was presented April 4 to General Hoyt S. Vandenberg, USAF Chief of Staff. Left to right: Col. W. L. Tubbs, Assistant for Ground Safety, USAF; Mr. Dearborn; Lt. Gen. L. S. Kuter, Deputy Chief of Staff Personnel, and Gen. Vandenberg.

AWARDS OF HONOR

Detroit Sulphite Pulp and Paper Co. (Entire company).

Forstmann Woolen Co., Passaic, N. J. (Entire company).

Farley and Loetscher Mfg. Co., Dubuque, Iowa (Entire company).

General Time Corp., Westclox Division, LaSalle, Ill.

Graniteville Co., Graniteville, S. C. (Entire company).

Martin-Parry Corp., Toledo, Ohio (Entire company).

The Mengel Co., Twelfth Street Plant, Louisville, Ky.

Merck & Co., Inc., Rahway, N. J. (Entire company).

Monsanto Chemical Co., Nitro, W. Va., Plant.

Olin Industries, Inc., Ecusta Paper Division, Pisgah Forest, N. C. (Entire company).

AWARDS OF MERIT

The American Pulley Co., Philadelphia, Pa.

Armco Steel Corp., East Works, Middletown, Ohio.

Brooks Scanlon Lumber Co., Inc., Logging and Railroad Dept., Bend, Ore.

Canadian Safety Fuse Co., Ltd., Brownsburg, Quebec.

Crown Zellerbach Corp., Camas Division, Camas, Wash.

Deere Mfg. Co., Des Moines Works.

The Flintkote Co. (Pioneer Division), Los Angeles, Calif.

General Electric Co., Lamp Division, Bellevue Lamp Works.

General Electric Co., Lamp Division, Bucyrus, Ohio.

General Electric Co., Lamp Division, Cleveland Works.

General Electric Co., Cleveland Welds Works.

General Electric Co., Lamp Division, East Cleveland Lamp Works.

General Electric Co., Lamp Division, Mahoning Glass Works, Niles, Ohio.

General Electric Co., Lamp Division, Newark Lamp Works, Newark, N. J.

General Electric Co., Lamp Division, Niles Glass Works, Niles, Ohio.

General Electric Co., Lamp Division, St. Louis Lamp Works, St. Louis, Mo.

General Time Corp., Seth Thomas Clocks Division, Thomaston, Conn.

Marathon Paper Mills of Canada Ltd., Mill Division, Marathon, Ontario, Canada.

—To page 90

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DOUBLE ASSURANCE OF BLUE RIBBON QUALITY

PAX-LANO-SAV* HEAVY DUTY,
the aristocrat of all granulated industrial skin cleansers, carries two symbols that are synonymous with fine quality:

(1) The Official Seal of Acceptance of the Committee on Cosmetics of the American Medical Association.

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The PAX line is complete. It will pay you to order all your needs from this one dependable source. Write today for catalog and name of nearest PAX distributor.

Always LOOK FOR THE PAX ROOSTER—it's your guide to cleansers that set the standards for the industry.

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IN HARD BOILED* SAFETY HATS

Self-shaping . . . like a well used felt hat. Air-cushioned for sheer comfort. Radiation tests prove them 10% cooler.

Save money. One size fits all heads... reduces inventories. Headband assembly can be removed or replaced in six seconds.

Color choice unlimited. Vivid, permanent colors molded all the way through *stronger-than-steel* Fiberglas shock-absorbing crowns.

Make safety hat wearing popular by furnishing Hard Boiled Hats or Caps.

WRITE FOR FREE COLOR CIRCULAR

EVERYTHING BULLARD IN SAFETY

HARD BOILED

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E. D. BULLARD COMPANY

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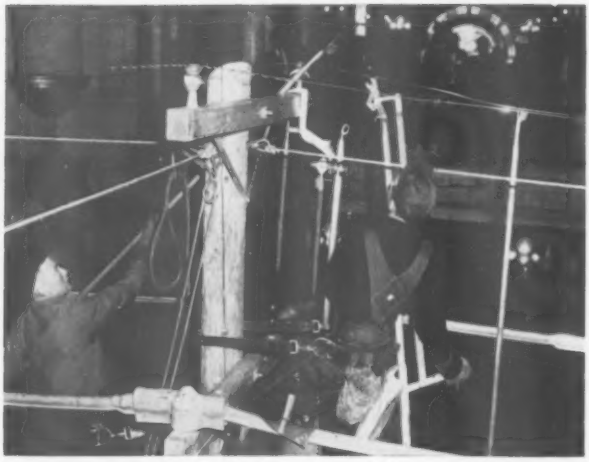
Demonstrate Hot-Line Work At Governor's Conference



Cornelius Mannix (left), working line foreman, and Harold Corbin, lineman, demonstrate "hot-stick" work in line repairs at Governor's Safety Conference in Helena, Mont. Crew of The Montana Power Company staged spectacular demonstration atop utility pole which was set up and strung with wires inside the rotunda of Montana's state capitol building.

A LINE CREW of The Montana Power Company provided the "show-stopper" at the annual Governor's Safety Conference this winter with an actual pole-top demonstration of proper line repairs in the rotunda of Montana's state capitol building.

The spectacular visual program was a highlight of an annual seminar sponsored by the Montana State Safety Council, which was held February 4 and 5 for representatives of industry, education and the home.

V. V. McDonnell, safety director of The Montana Power Company, conducted the demonstration with the assistance of a crew from the company's Helena division. That division won the company's Frank W. Bird safety trophy for 1951.

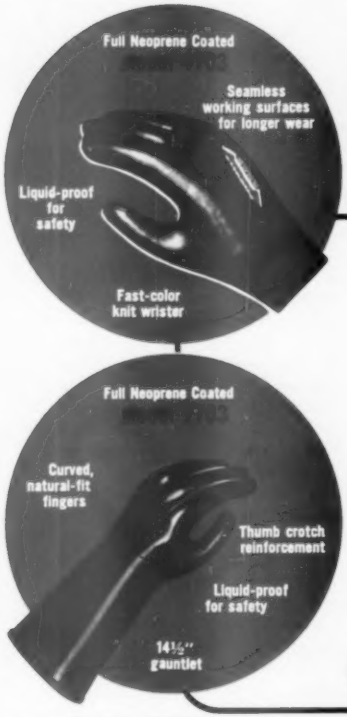
A pole was erected in the capitol rotunda and was completely equipped with crossarms, transformer and distribution lines representing a 4160-volt primary and lighted secondary, and a 12,000-volt primary.

The crew, during the demonstration, repaired the trouble after an outage was brought about on the 4160-volt line. Then it changed insulators which had been shot off on the 12,000-volt primary top crossarm. Rubber protective equipment and hot sticks were used.

The crew, which won commendation from the spectators for safety measures and teamwork, included Fred Black, non-working foreman; Cornelius Mannix, working line foreman; Harold Corbin, lineman; Julius Lehfeldt, an apprentice lineman working as a groundman for the demonstration, and B. M. Chaffin, Helena city foreman, who supervised the work. McDonnell followed the work of the men with a running commentary.

The repair work went through all phases from the "tailboard" conference, at which the foreman gave instructions as to what was to be done, to the clean-up.

The demonstration was termed "outstanding" by Governor John W. Bonner and officials of the Montana State Safety Council, and was received enthusiastically by those who attended the conference.



HOOD "electronically timed" dipping assures uniform, safer GLOVES

You can be sure that Hood gloves have no weak spots caused by thin coating, because they are carefully and uniformly dipped, using an accurate electronic timing device.

Hood's quality control system, with continuous inspection at every step, results in extra-quality, uniform gloves with maximum safety.

Hood makes a complete line of industrial rubber gloves to meet every job requirement. Write today for colorful catalog featuring the Hood Glove Guide, which shows you "how to choose the RIGHT Glove for EACH job."

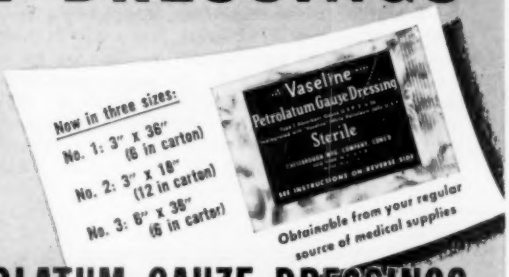
hands are vital..protect them with HOOD GLOVES

HOOD RUBBER CO., Watertown, Mass.

DEPENDABLE DRESSINGS

for FIRST AID, for EMERGENCY for DISASTER, for DEFENSE

With a distinguished record of use by the medical services of the Armed Forces, by other governmental agencies, by hospitals, by emergency and disaster units, by industrial clinics and first-aid stations . . .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No. 1: 3" x 36" (6 in carton)
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Petrolatum Gauze Dressing
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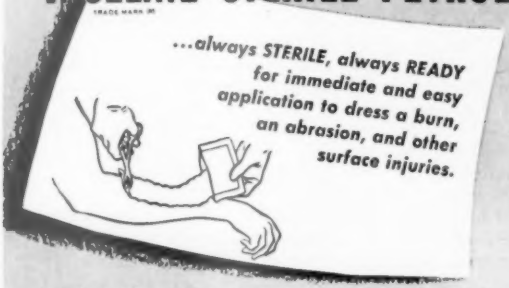
Obtainable from your regular source of medical supplies

VASELINE STERILE PETROLATUM GAUZE DRESSINGS



have been adopted by surgeons as standard procedure, by nurses as preferred matériel, by professionally-trained aid personnel as the compact, ready-made, ready-to-apply dressing of their choice.

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Specify these superior dressings in the foil-envelopes to your supplier.

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How Floor Coverings Resist Reagents

Taber Abraser used at NBS to investigate resistance of floor coverings to grease, oils, and selected reagents. The device, equipped with special pivoted beam mounted with a sharp-edged tool under a 500-gram load, determined the softening effect of reagents on floor coverings.

EFFECTS of grease, oils, alkalies, acids, and bleaches on 40 floor coverings from 17 different manufacturers have been investigated by P. A. Sigler and T. H. Boone of the National Bureau of Standards. Conducted at the request of the Office of the Chief of Engineers, Department of the Army, the tests were made on coverings ranging from such general types as vinyl, rubber, linoleum, asphalt, and printed enamel to several proprietary materials.

The reagents to which these coverings were exposed included beef tallow, kerosene, cottonseed oil, lubricating oil, solutions of soap, sodium carbonate, trisodium phosphate, sodium hydroxide, acetic acid, sulfuric acid, and hydrogen peroxide.

As a standard testing technique for evaluating these properties was not available, a technique was devised which essentially measured the depth of a scratch caused by a "mechanical fingernail" after exposure of the material to the reagent for 24 hours. While this method has not yet been thoroughly correlated with the scratch resistance of floor coverings in service, it has since been included in interim Federal Specifications for asphalt tile, No. SS-T-307 (GSA-FSS) of October 1, 1951.

In detail, the method involved the use of a Taber Abraser equipped with an attachment for measuring shear hardness to determine the softening effect of the reagents on the various floor coverings. The coverings were prepared for testing by cementing the surface of a 2- by 4-inch specimen on one end of a hollow sheet-metal cylinder, 1½ inches in diameter. Ten milliliters of test reagent were poured into the cylinders, covered to retard evaporation, and allowed to stand for 24 hours. After the reagent and cylinder were removed from the specimen, the exposed surface was blotted lightly and examined visually for defects.

The specimen was then placed on the turntable of the Taber Abraser, and a 1-inch scratch made by means of a sharp-edged tool on a pivoted beam under a load of 500 grams. The tool was curved so that the scratch width was reasonably proportional to its depth. A scratch width of over 150 mils was considered to indicate a softening effect; a scratch width of between 100 and 150 mils, a slight softening effect; and a width below 100 mils, no softening effect.

Of the various floor coverings tested, the vinyl plastics were, in general, most resistant to grease and oils. With a few exceptions, they also showed fair to good resistance to alkalies, while a number of the plastic floor coverings were adversely affected by dilute acids.

The regular asphalt tiles showed very poor resistance to most of the oils and only fair resistance to beef tallow. Some of the so-called "grease-resistant" asphalt tiles were not outstanding as regards grease and oil resistance, and most showed poor resistance to dilute acids.

All of the linoleums were materially affected by alkaline cleaning solutions and were partially disintegrated by a 1 per cent solution of sodium hydroxide. They provided poor resistance to acids and hydrogen peroxide, and with the exception of brown battleship linoleum, were appreciably softened by kerosene. Several were also slightly softened by beef tallow.

None of the rubber tiles withstood the effects of kerosene but

—To page 115

Keep him on the job!

Hexachlorophene in Formula #99 Antiseptic Soap cuts absenteeism by combating dermatitis and infections!

You can solve many dermatitis problems—and protect your employees at the same time—by a simple change in washroom supplies. Armour's antiseptic soaps help relieve industrial dermatitis and reduce the danger of infection from small cuts.

Figures from various Bureaus of Labor Statistics show that over 50% of all occupational diseases are classed as industrial dermatitis. Most of these are caused by daily contact with irritants like cutting oils, solvents, abrasives, acids, alkalis, waxes, etc. In addition, workers frequently suffer minor cuts that can be a source of skin infection. To help combat this health problem—and overcome the resultant loss of man-hours, Armour has developed Formula #99 Antiseptic Soap especially for industrial use.

In washrooms, Formula #99 Powdered Antiseptic Soap maintains an extremely low bacterial count on the skin of hands and forearms, due to its active agent, Hexachlorophene—and this protection increases with regular use.

Formula #99 Antiseptic Soap is also available in *liquid* form. Write today for booklet and samples.

ARMOUR *Industrial Soap Department*

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MAIL THIS TODAY!

Please send me:

- ☐ "Antiseptic Soaps for Industrial Use"
- ☐ Formula #99 Powdered Antiseptic Soap sample
- ☐ Formula #99 Liquid Antiseptic Soap sample

Name..... *Title*.....

Firm.....

Address.....

City..... *Zone*..... *State*.....

Keeping Lead Out of the Air

(From page 44)

dust collectors which filter lead dust and fume out of the air.

A typical dust collector installation is at the Memphis, Tenn., plant. Here, one collector with a cloth area of 2,115 square feet handles all the air required to ventilate a battery plate cutting machine, a conveyor housing, and a refining kettle. Concentrations of dust are kept within the limits specified by the state code.

When the plates are cut on the machine, the scrap falls into a pit under the floor and from there it is carried to the refining kettle. There it is remelted with pig lead for use in other molding operations.

Air passing through the hoods and pit is kept at high velocity to collect all the dust generated at the plate cutting machine. The conveyor is totally enclosed and ventilated by ducts.

An attached hood for dross collection at the refining kettle traps the lead oxide fumes given off there. A hood on the conveyor discharges also ventilates the refining kettle.

The cloth in the Memphis installation is in the form of cotton sateen tubes. Cotton cloth was selected after thorough study of air temperature, corrosive properties of the dust, and other factors determining the kind of cloth needed for satisfactory operation. At predetermined intervals, these tubes are mechanically shaken to dislodge the collected dust which then falls down into the hopper. Each hopper is equipped with a swing gate valve which swings downward to empty the dust into standard lead oxide cans.

To keep the hopper-emptying operation dust-free, special lids are used on the cans. One end of a tight cylindrical canvas tube is clamped to the hopper, and the other end is fastened to the special lid. When these lids are clamped on the cans, the dust being emptied out of the hoppers is prevented from escaping into the atmosphere.

The hooding, duct work and conveyor were designed by Willard's engineers and the dust collectors were manufactured by the American Wheelabrator & Equipment Corporation, Mishawauka, Indiana.

Scrap conveyor housing in which scrap from plate cutting machine is transported to refining kettle. Conveyor is totally enclosed throughout its length. Plate-cutting machine is at right, out of range of camera. Conveyor is ventilated by means of ducts shown at each end.

The Reader's Point of View

Comments on topics of current interest are always welcome. They need not agree with the opinions of the editors.

Diagnosing Machine Ills

HAVANA, CUBA — I noted with interest the cover of your February issue showing application of a medical stethoscope for checking motor bearings. This recalled an occasion when I used a stethoscope to find the cause of a rattling noise on a power transformer.

A 3000 Kva., 33 KV/2300 V. substation transformer was making a noise that could be attributed to different causes. By using the stethoscope the zone of maximum noise intensity was located and chalked. The oil was partially removed and an iron angle piece bolted to the tank was found loose. After tightening this piece the transformer was placed back in operation and the abnormal sound disappeared.

A few days later the same stethoscope was used in locating a misadjusted valve on a multicylinder truck motor. The valve was located, the valve gap adjusted, and the noise disappeared.

This happened to the writer at Cienfuegos, Cuba, while acting as temporary division superintendent of our company.

REMBERTO NIN MESA, E. E.
Engineering Dept., Compania Cubana de Electricidad

Industry's Ghost Army

ABSENCE because of sickness means that a ghost army of 2,000,000 workers is lost to American industry each year, officials of the 1952 Industrial Health Conference estimate.

These officials, who directed the the Conference of 2,000 industrial physicians, surgeons, dentists, nurses and hygienists recently held in Cincinnati, said sickness accounts for the loss of 500 million man-days from industry in a single year. This is the equivalent of 2,000,000 employees off the job.

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Obituary

John S. Shaw Dies

JOHN S. SHAW, 67, former director of safety of Hercules Powder Company, and former president of the American Society of Safety Engineers, died April 26 in the Memorial Hospital in Houston, Texas, after an illness of several months.

A resident of Wilmington, Del., Mr. Shaw was visiting a daughter, Mrs. Roland Cardner, in Houston, when he became ill.

Mr. Shaw retired January, 1950, after nearly half a century pioneering in the field of industrial safety.

Born in Baltimore, Md., Mr. Shaw spent most of his early life in Macon, Ga. He studied chemistry at Michigan State College and Johns Hopkins University.

From 1906 until 1913, Mr. Shaw was engaged in the production of explosives and acids for the DuPont Company at plants in New Jersey, Michigan, Wisconsin, and California.

Following the dissolution of the old DuPont Company, he was transferred to Hercules in 1913, as superintendent of acid and high explosives production in Hercules, Calif. He was named superintendent of the Hercules plant at Parlin, N. J., in 1917. In World War I, he aided in the planning and direction of a government explosives plant at Nitro, West Va. Mr. Shaw became a member of the company's Industrial Research Department in 1919, with offices in Philadelphia, Pa.

His interests lay in improving operating methods to increase yields and to cut down industrial hazards; and he was assigned to this work as assistant to the general manager of the company. It was one of the early formal efforts made in American industry to study and improve safety of operations.

In 1925, Mr. Shaw was named manager of the Safety and Service Department. He was appointed director of safety in 1941.

John S. Shaw

Mr. Shaw served several times as general chairman of the Chemical Section, National Safety Council. When the American Society of Safety Engineers became an independent society in 1947, he was elected president of the new organization. He was a member of the Safety and Security Division of the U. S. Ordnance Department, serving as a consultant to the chief of that division, and was a former director of both the National and the Delaware Safety Councils, and a member of the Safety Engineers Club of Delaware.

Survivors include: his widow, Mrs. Lucile H. Shaw; two children by a previous marriage: Mrs. Cardner, and William C. Shaw, Nashville, Tenn.; and Mrs. Shaw's three daughters by a previous marriage: Mrs. Jane Brown, Marietta, Ga., Mrs. John Loud, Bluefield, W. Va., and Mrs. William Campbell, Pittsburgh, Pa.

C. LAURENCE WARWICK

C. LAURENCE WARWICK, executive secretary, American Society for Testing Materials, and its administrative head since 1919, died suddenly April 23, shortly after presiding at a dinner honoring the retiring treasurer of the Society. He was 63 years old.

Mr. Warwick had been active in the Society since 1909 when he graduated from the University of Pennsylvania in civil engineering. While he was instructor and assistant professor at the University, he also served as assistant secretary of ASTM with Edgar Marburg, the Society's founder secretary. In 1919, on the death of Dr. Marburg, he was appointed Secretary-Treasurer (chief executive officer) and in 1946 became Executive Secretary.

He had made many notable contributions to the field of standardization and research in materials and was recognized as an outstanding authority on materials. One of his important contributions was in the War Production Board during World War II, where he served as Head of the Specifications Branch of the Conservation Division, and later headed the Materials Division.

D. C. STEWART

D. C. STEWART, system safety supervisor for the Niagara Hudson Power Corp., died April 5 after a brief illness.

Mr. Stewart was born in Carlyle, Ontario, in 1898. He attended the Hamilton, Ontario, Collegiate Institute and Massachusetts Institute of Technology, from which he was graduated in 1922 with the degree of Bachelor of Science in Electrical Engineering.

After graduation from M. I. T., Mr. Stewart joined a predecessor of Niagara Hudson as a draftsman. In 1925 he was named engineering assistant and in 1928 a designer of transmission lines and substations for the western division companies of the system. In 1940 he was assigned to make a survey of accident problems in the Buffalo distribution department of the company. As a result of these studies he was named safety supervisor for the Western division and in

—To page 85

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The Army Looks at Safety

(From page 21)

protect himself in order that he might survive. This takes the form of an understanding of how to dig a foxhole; how to prepare military fortifications; how to use the reverse slope of a hill, and every other trick known to the battlefield.

Designed for Combat Safety

So much for training. Let us look at some of the design aspects in combat safety. Take a look at a common jeep and see what it evinces. Why do you suppose it was designed with not over a 40-inch height with the windshield down? Basically, a safety measure in order that the silhouette of the vehicle will not be too obvious to an enemy firing at it, and at the same time making it possible for its equipment—a machine gun —to deliver its own fire.

Note the soldier operating a jeep and you will see another major safety device—a helmet designed with scientific knowledge in order that it might deflect missiles and thereby limit the injury to the individual himself.

Look at the tank with its awkward angles of steel projecting in one direction or another with apparent disregard of good streamlined design. Rest assured those angles are put on there so the enemy shells will glance and deflect and thereby act as protection for the operators.

These few examples will indicate that the military leader has perhaps been the first in the field of safety engineering. Look back over history and you will see that from time immemorial such has been the case. From the purely animal protective devices of agility, change of color, etc., man first developed his military equipment from the fist and the stick through the present atomic weapons. As a guard against these ever more powerful weapons, the military leader had to develop safety devices in the form first of the shield, later personal battle armor for both man and horse. Then came the revolutionary change of the tank during World War I and now into the atomic age with the same problems of new weapons and protection against their effect being constantly compromised on the field of battle.

Perhaps it is from the battlefield that all safety engineering first stemmed. We train the soldier to perform some of the most unsafe acts known to man, but on the other hand we design his equipment and train him constantly in the best precepts of safety engineering.

Let us examine a bit further "why" the army is so safety conscious. A soldier who is injured in an accident and unavailable for duty is a distinct liability. He is of no use to himself, his organization or the mission of the army, but being part of the army, he must receive proper care, so he becomes far more of a liability than an injured man in your plant. Furthermore, he reduces the available manpower of the armed forces, not only by the loss of himself, but by the additional loss of those who must care for him. For all practical considerations, he is a casualty, whether he be injured in an accident or wounded on the field of battle. Army leaders are keenly aware of the drain on manpower caused by avoidable accidents and are utilizing every possible means of stopping this drain.

Safety Principles

So much for combat safety engineering. Let us look at our second topic—the special application of safety principles within the military services. There are in this field some unusual, and shall I say non-standard, practices in the application of safety engineering.

First, let us examine that huge area of safety concerned with highway traffic. As I pointed out before, we have many vehicles and track-laying units which are basically designed for safety on the battlefield, but certainly this same thing cannot be said of their road ability. Many military characteristics in a vehicle are directly opposed to the maximum safety on the highway. Poor visibility, short wheelbases, hidden lights and a myriad of other features come within this category.

Again, reverting to the jeep by way of example, need I inform you that the 8th Army lost is gallant commander, General Walton Walker, in such a road accident. Or, perhaps you will remember that our famed 3rd Army Commander, General Patton, was the victim of a highway traffic accident. Our military vehicle designers, conscious of this deficiency, compromise the best layout to accomplish the battlefield mission of a vehicle and also to get a reasonably safe highway performance.

In this field, the military services have a herculean training job but still the hysteria of speed takes its continued heavy toll of military personnel.

Safety Engineering Statistics

In the application of safety engineering statistics to highway accidents, you safety people in industry are responsible only for accidents and injuries which occur to your personnel while on the job. True, you take an active interest in prevention of off-the-job accidents for humanitarian and other good reasons, but your frequency and severity rates do not reflect those accidents. On the other hand, the soldier is on duty 24 hours a day and army frequency rates must necessarily include all accidents to military personnel wherever they are and whatever they are doing, even while on leave.

This, of course, makes our statistics out of balance when compared to civilian figures. In spite of this, it is gratifying to be able to say that the army frequency rates are below national industrial averages. If we were to include only those accidents which

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occur on duty and on post during the individual's regular occupation hours, our rates would be even lower than they are at present.

With the special treatment afforded motor vehicle accidents and statistics, let us broaden our discussion to give you some idea of how the army handles its safety program. The army has *one* safety program which applies to all commands and installations, regardless of size, location or mission. Safety in combat is entirely in the hands of the tactical commander on the spot; safety in a post or installation is not entirely dependent on the ideas of the local commander who may or may not be safety-minded. Regulations cover much of the operation of the program and the local commander is bound by these rules.

In order to emphasize the large army safety program, may I say it is probably unparalleled in any other activity in the world today. The report for the third quarter of 1951 gives an idea as to its thoroughness and scope. Since this report deals with figures as to manpower, I regret that I cannot show it in greater detail; it is restricted security information, but the first paragraph of the introduction states its purpose:

> This publication presents accident experience data concerning all personnel and equipment of army installations world-wide. It provides factual information for measurement of progress or retrogression in the frequency of accidents resulting in (a) injuries to military personnel, (b) injuries to civilian employees, (c) injuries to "other army" personnel, (d) injuries to non-army personnel, (e) damage to army equipment, materials, or property if incident to an army operation or activity, and (g) the frequency of accidents involving army owned or operated motor vehicles which resulted in injury to persons or damage to property.

The program is established by army regulations and administered by the army safety director in Washington under authority from the Assistant Chief of Staff G-1.

Next in line are the safety directors of the various army commands, including overseas as well as the six continental armies. These army safety directors and their staffs are in constant touch with the local installations in their respective areas, and check on the efficiency of the program operation in them.

Then, each installation has its safety officer or director, with such additional engineers, inspectors and clerical help as the size and type of operations require.

In recent years there has been a trend toward having civilians fill these safety jobs. As you know, it sometimes takes a few years for a person to become familiar with the operations of a large industrial establishment. It is army custom to move officers quite frequently, so about the time an officer would become familiar with an organization and the numerous details of its operations, he would probably be transferred to another post. Therefore, appointment of civilians to these jobs means that their acquired familiarity with operations and understanding of local conditions is more continuous.

Now, in addition to this comprehensive organization just described, there is a staff of specialists who work in conjunction with it. It is hardly to be expected that any *one* safety engineer could become thoroughly familiar with all phases of army safety: new

—To page 110

Wetting Before Welding

SPECIAL REELS of water-charged half-inch hose help prevent fires while welding operations are underway at Weyerhaeuser Timber company's sawmill at Springfield, Oregon.

Weyerhaeuser maintenance crews have mounted the hose reels on walls and posts near areas where welding equipment and cutting torches are frequently used in repair work. Each reel carries 150 feet of half-inch industrial hose always charged with water. The hose is fitted with a sprinkler-type nozzle that will hold water pressure when closed.

Before starting a welding or cutting operation, maintenance men use the hose to wet down floors and machinery adjacent to the work area. This precaution prevents fires that might otherwise be started by sparks from welding and cutting torches.

Before the special hose and reels were installed, welding crews used the sawmill's standard fire hose to wet down floors. This was heavy and hard to handle and replace on reels.

Now the crews use for this purpose the light, flexible and easy-to-handle half-inch hose. By so doing, they save time and reduce wear on the more costly fire hose.

Before welding or cutting is done at Weyerhaeuser's Springfield, Ore., sawmill, floors and machinery are wet down. Tom Powers, fire patrolman, checks nozzle on half-inch hose used by maintenance crews. Hose reel is made from sections of pipe welded together. Reel hub is piece of 5-inch pipe. Spokes and hoops welded to them are ¾-inch pipe. Flexible or swing coupling carries water through hub of reel and into hose.

Reels carrying the half-inch hose were fabricated in the company's machine shop at the Springfield plant. Eighteen of the reels have been mounted in the sawmill, two in the mill power-house and four in the planing mill.

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- In the first reports on campaigns, average payroll participation (companies reporting) went from 20% to 32%. Latest indications are that the average participation—all 28 companies—will be well over 50% by the time the canvasses are completed.
- It is estimated that the 70,000 new Payroll Savers already added to the Plan through the co-operation of Mr. Echols and his Committee will purchase more than 15 million dollars worth of Series E Defense Bonds during the next twelve months.

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Now See Here, Ned

—From page 27

gained, walking through plants, in bunk houses in the hills, in the jolting cabooses at the end of long freight trains, and in the mess rooms of the ore boats.

I've seen the shops where you could feel the scorn for the safety man as you walked with him, could almost see out of the back of your head the thumb-nose gesture of the ditched goggles, the hand truck shoved across the floor with contempt. You could feel it in the eyes of the wise old foremen who appraised with deadly realism the individual influence of the latest front-office guy to come and tell them how to do their business.

Nowadays, it seems to me, the good safety man is welcome. I see the shop hands and the foremen bring problems up, see them brag about a minor improvement. I think, allowing for the widest possible variation, that on the average the industrial safety man has gained greater respect from down under.

I wonder whether this is because the safety men have become wiser in their dealing with people, or because, once they were less on the defensive, it was possible for them to become wiser. For I do think the safety men are better than they were seven years ago. Not all of them—there were wonderful guys and geniuses in the field then and there probably are a few heels and boobs in it now. But the good Joes are more numerous and the heels are getting wondrous rare.

I think part of this improvement is your doing, Ned, yours with some quietly brilliant shortstopping by the guy who is my nomination as the brainiest backstage figure on the Council staff, Rube Forney. But even between you both, you don't rate all the credit. You have to share it with a lot of very able people on and off your staff.

As president of the National Safety Council, you have done some wonderful building upon the foundation that the safety pioneers laid for you. The Council has taught a lot of human relations to a lot of people—in member training courses, in film series, yes—allow me this brag—in its magazines. I think plant publication editors and safety directors are better safety men today because Carman Fish is the kind of guy he is, and because the Council brass let him be himself in his editorship of the NATIONAL SAFETY NEWS and his *Newsletter*. I think foremen by the thousands are wiser because Norval Burch edits the *Industrial Supervisor* in a way which hits solid, human facts about people. And because Frank Davin knows the truckers, the transit men, the police, and gets that knowledge into living type and pictures. And, always, because Paul Jones has not permitted but demanded a type of approach to the human race in the National Safety Council's whole public information which is based on the premise that we are all a bunch of good-natured, unopinionated mugs, talking to a lot of other guys who may or may not be mugs, but who, in any case, can be talked to like mugs.

You talked cooperation to me, Ned, during that long lunch conference seven years ago in which you set my course as editorial director.

You told me then, what I've heard you tell a lot of other people since, that the National Safety Council had no greed for credit, that it wanted to work with all and sundry, that if anybody could help save human lives, all of us would profit by it.

I've seen a lot of reactions to such words—the bright, naive looks of hope and the glowers of cynicism.

I don't know how you find it, up in the higher echelons. But I know how it looks down under, and how it looks to the second stringers between the high echelons and the shop floor.

It looks good, Ned. It looks better all the time. What you've said makes crystal-clear sense to the guy on the firing line, to the guy who is close enough to accidents to need first aid training as well as accident prevention training. He may not know much about the National Safety Council or any other safety organization. He may care less. But he knows a good

guard and a good poster, a good safety engineer and a good foreman. I've some wonderful friends up and down the safety movement—guys you wouldn't often meet—who know precisely what cooperation means. Guys whose ideas I steal and who steal mine, with a joyous and mutual larceny-by-consent.

One clue I do have about the high echelon cooperative developments—that's the actions of some Number Two men in organizations, guys who would have to restrain any tendency to be decent if their bosses were frowning at us. And here, again, over the years, I think I see real progress. It's been quite a while since I've evoked in a guy in another organization what I took to be a second-hand animosity, based not on his reaction to me, but on his boss's reaction to you or somebody else.

One thing I'm certain of—safety means more today to the general public than ever before, and safety has a broader meaning to the industrial or traffic man. I don't think the American public is particularly well-informed about safety matters. But it is aware of them, and getting more aware.

I can't ride a club car or a truck and admit my connection with the Council without being exposed to learned lectures on just what the safety movement ought to do about everything. The suggestions don't always make sense—but Mr. Smith and Mrs. Smith and little Joey and Suzy are certainly thinking about safety.

I would like to give the credit for this wonderful improvement to a couple of guys named Paul Jones and Dan Thompson, with assists from Jack Horner and Ralph Moses and me, the loud voices in the NSC public information choir, and from such loyal volunteers as Boyd Lewis and Earl Hall.

But we can't kid ourselves. Even if we are half as smart and able as we think we are, we know that, up and down the pike, there are other men and women doing brilliant jobs of alerting the public to the safety problem. Big names you know, like Eddie Cantor; and a lot of other names not so big.

Perhaps we're verging on the

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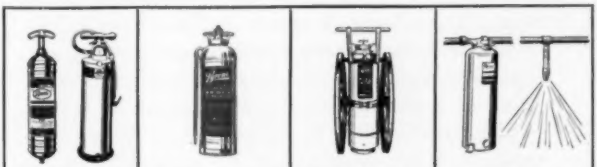

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cooperative millenium you spoke of—when none of us can tell how much we've done and how much we are helped by the efforts of the guys battling beside us.

This is a most unlearned, scrappy report. It is just an attempt by a guy to say, as he steps out of his job, "I hope my successor has the advantage of just as wise a policy direction and just as happy a set of relationships on and off the Council staff as I have had."

* * *

There is one other thing I want to say, not as a report from the field, but as a matter of very deep and strong conviction.

I'm leaving the Council staff to enter the ministry of my church. I do so because I honestly believe that I have a call to this particular kind of service; that I have, in fact, no choice in the matter.

It is a matter of very real satisfaction to me that the terms under which I begin this ministry will allow me to keep a hand in on the safety movement, to go to some meetings, to do some writing for you and others interested in safety.

I want to leave with you, as an earnest of the fact that I consider the work of the safety movement to be morally and spiritually rewarding, a statement from Sidney Williams which you once quoted in an editorial in NATIONAL SAFETY NEWS. Sidney, who is one of safety's truly great men, said:

"I know we save some lives, prevent some property damage. Just how many and how much we don't know. But this is, to me, a minor part of the value of the work of the safety movement.

"The one tremendously important fact about our work is that it offers one of the best opportunities in our civilization for men and women to apply in practical matters the Christian principles of living in a cooperative effort to help each other. I think that this lesson of Christian living is the most important lesson our world has to learn. If we don't learn it, we're going to destroy ourselves."

Happiness sometimes sneaks in through a door you didn't know you had left open.

Electrical Fires

—*From page 23*

brush your head or back against the wires. Remember that the insulation on the wires is not to be depended upon for protection. Also, your rubber coat is not sufficient protection. When hauling hose up to the roof of a building, watch that the rope does not pull the wires together and cause a short circuit.

Look out for fallen wires. Always assume that they are alive. Should a wire lie in a puddle, don't step into that puddle, even with rubber boots on. If a fallen wire rests on a car or truck, don't step onto or off the vehicle, and don't touch the vehicle. Firemen's rubber boots are not protection against electric shock.

Beware of metal ladders. It is safer not to use them except possibly as the aerial ladder on the truck, and even then it is important to avoid stepping directly from the ground to the truck. A piece of heavy rubber matting placed on the ground at the sides, front and rear of the truck is suggested.

If someone is shocked, waste no time in freeing him from contact with the live conductor. But don't use your bare hands, even on his clothing. Use the pike pole, a rope or even your coat held by the sleeves and thrown over his body so as to pull him away. Start resuscitation at once and send someone to call your electric company to send an inhalator. In fact, whenever a fire involves or is likely to involve electrical equipment, notify the electric company at once.

If the fire is in the transformer vault in an industrial plant, put on a gas mask before entering. At such fires it is better to delay entering until the power has been shut off. If the fire is in a street or sidewalk transformer vault, don't remove the cover until the current is turned off. Remember that the fire may have produced flammable gases from the burning insulation, and there may still be arcing between conductors. All you need to complete the fire triangle is to provide oxygen, and removing the cover can do it, and

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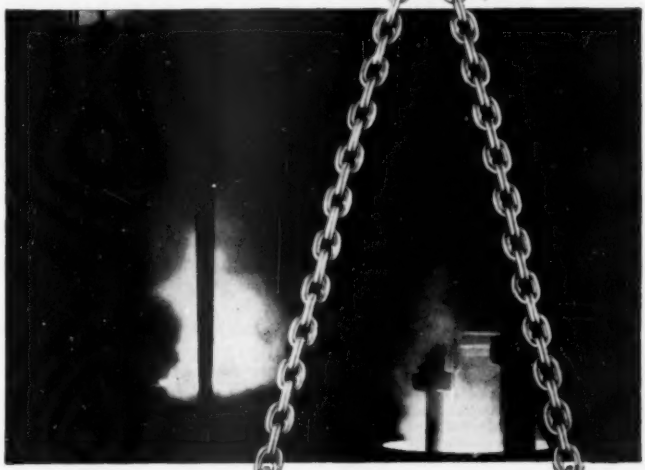

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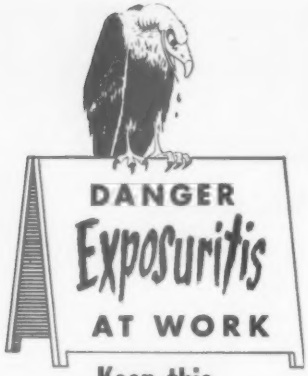

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Write, Wire or Call COLLECT for the jobber nearest you

a violent explosion may follow.

Should you be called to a fire in a power company substation, first contact the operator and be guided by his advice as to the method of extinguishing the fire. Remember that he cannot "kill" all the apparatus, and he knows what is alive and what is dead. Don't, under any condition, use a solid stream from the fire hose within a substation. The high-velocity fog nozzle, however, can be used in safety in such locations, regardless of the voltages encountered, provided you stay at least six feet from all live apparatus. Don't use the low-velocity fog applicator in substations, for you may poke the pipe through the smoke into some live bus bar. Never use foam unless you have the approval of the operator.

There is one point to remember concerning electrical fires. Keep in mind, that except when a large quantity of transil oil has become ignited, the damage has all been done at the instant of the electrical breakdown, so ordinarily it is better to let the fire burn itself out, but protect any adjacent combustible material from ignition.

Never unnecessarily direct water onto live electrical apparatus or conductors. However, in the event of fire don't hesitate to use water from a reasonable distance. For instance, using a 2½" hose with a 1⅛" nozzle tip, the safe distances using fresh water are as follow:

1100 Volts	from 6 feet
2200 Volts	from 11 feet
3300 Volts	from 15 feet
5500 Volts	from 18 feet
6600 Volts	from 19 feet
11,000 Volts	from 20 feet
22,000 Volts	from 25 feet
33,000 Volts	from 30 feet

With a high-velocity fog nozzle, the safe distance is said to be:

22,000 Volts	from 3 feet
120,000 Volts	from 5 feet

The National Safety Council advises that it has no record of a fireman having been electrocuted by current flowing through the hose stream. The N.F.P.A. cites several fatalities, but in most cases other factors seem to have existed.

The effect of 60 cycle electric current on human beings is given in the following table:

1 to 8	milliamperes—barely perceptible
8 to 15	milliamperes—painful
15 to 20	milliamperes—muscles "freeze" to conductor
20 to 50	milliamperes—difficulty in breathing
100 to 200	milliamperes—death and severe burning

At tests conducted at Purdue University, human subjects were able to withstand current flow up to 30 ma. At the Consolidated Edison Company Fire School classes, the students hold the brass high velocity fog nozzle with their bare hands while directing the fog of salt (sea) water at a target 6 feet away energized to 27,000 volts to ground. Under test, there was no current recorded on the milliammeter when the nozzle was mounted 21" from the target.

In order to be dependable, the rubber gloves carried on your truck should be tested to 10,000 volts at least twice daily. In some electric companies the linemen's gloves which receive severe usage are tested weekly.

To sum up, let me say that good practice calls for the "killing" of all electrical apparatus before using any fire extinguishing agent on it, or in the vicinity of it. Yet there may be many instances where it would be a mistake to cut off all electrical service, thus stopping fire pumps, elevators, signal systems, fans, lights, etc. and handicap the firemen and possibly allow the fire to get out of control. In such cases firemen should not hesitate to use CO_2, dry chemical, carbon tetrachloride, water fog and, under some conditions, even a solid stream on fires involving electrical equipment, provided, of course, that care is exercised to keep as far away as possible from the live conductors.

Five Alumni Honored By Penn State

FIVE PROMINENT ALUMNI of The Pennsylvania State College were honored by the college recently in a special Honors Day program. The recipients were chosen for the award by the Penn State Board of Trustees because "their personal lives, professional

achievements and community services best exemplify the objectives of their alma mater."

Recipients of the Distinguished Alumni Awards, with their years of graduation, were:

George H. Deike, 1903, president, director and treasurer, Mine Safety Appliances Company, Pittsburgh.

John J. Forbes, 1911, director, Bureau of Mines, U. S. Department of the Interior.

Lewis E. Young, 1900, former operating vice-president, Pittsburgh Coal Company; now a consultant in this field.

Miles I. Kilmer, 1906, vice-president and general manager, Mason and Hanger Company, engineers and contractors, New York.

John M. Spangler, 1911, chairman and consultant, and former president, of National Carbon Company.

Each received a special medallion and an illuminated parchment scroll from the college president, Milton S. Eisenhower.

Death to Pests

—*From page 31*

liberally spray these areas with a residual insecticide.

Residual Insecticides

A residual insecticide is a *surface spray* that kills by coating a surface with an active deposit of insecticidal substance, poisonous to insects. When these insects crawl across or alight upon the treated surfaces, they pick up small particles of the insecticide until a lethal dose has been absorbed.

Here, especially, there is a very wide range in the toxicity and effectiveness of the residual insecticides available. Some of the residuals, such as DDT and other related chlorinated hydrocarbons, entail toxic hazards to humans and extra precautions are necessary if they are used.

Modern concepts of sanitation obviate the necessity for using dangerous pesticides. "Insect and rodent proofing" of the premises, together with thorough housekeeping practices, makes it possible to maintain very satisfactory control through the use of safer and

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relatively less toxic materials. Suffice it to say that safety and effectiveness should be major considerations.

Advantages:

1. If surfaces are sprayed with a frequency dictated by the residual limitations of the insecticide used, an "active" surface will result, lethal to insects for many weeks.

2. Continual control is achieved of insects foraging far from their protected harborages, as well as those recently introduced into the plant.

Disadvantages:

1. If highly toxic materials are used, a serious hazard to employees is created.

2. Produces a slow acting kill and enhances the danger of dead and dying insects (particularly flies) falling into processed foodstuffs.

3. Surfaces accumulating dust, dirt, grease, etc., will nullify effectiveness.

4. Unless carefully and properly applied, will contaminate food and equipment, or build up messy residual deposits.

Residual Spraying

Since a residual or surface spray is designed to poison surfaces insects will traverse, it is necessary to apply them in such a manner that "food contact surfaces" will not become contaminated. If extremely toxic insecticides are used, they should be limited to the non-product zone areas, and effective measures taken to preclude the possibility of misuse. Several important factors should be emphasized in this connection.

1. A residual spray should *never* be used to "fog" up an area as a space spray.

2. Residuals should be applied with a flat spray pattern that will thoroughly wet down the surfaces desired, with a minimum of "bounce." It is essential to coarsely atomize the spray so droplets form to the point of starting to run.

In effect, you are "painting" the surfaces with insecticide, and it may even be applied with a brush. Special attention should be given to driving the residual deep into cracks, crevices and other points of infestation with force, so contact can be made where the bugs are lurking. Where such harborages are located, the walls and surrounding surfaces should be heavily sprayed for several feet in each direction.

3. It is vital to realize that subsequent accumulations of dust, dirt, flour, grease, etc., will mitigate or neutralize the effectiveness of the most toxic residual. Where such deposits occur on residually treated surfaces, it will "insulate" the bugs from a lethal contact. This again serves to illustrate the importance of a regular, continuous cleaning program. Washing the treated surfaces with detergents and cleaning compounds will also serve to reduce, if not nullify the killing action.

4. The frequency of application must be determined by the length of the residual effectiveness of the insecticide used . . . and the life cycle and type of insects involved. So many limiting factors complicate the situation, such as the porosity of the surfaces treated, that no hard and fast rules for application frequency can be evolved without adequately checking the results. Since most insecticides are generally considered ineffective in controlling the egg, larval and pupal stage, it is necessary to plan your program so the life cycle is sure to be broken.

Insect and Rodent Powders

Insecticide powders and dusts, and powdered rodenticides, are messy and unsightly and are not considered suitable for food plant use. They can easily become a source of contamination, tracked by insects and rodents, or carried by air currents and building and machinery vibrations.

Spot Fumigants

All fumigants are poisonous to man. Although local or spot fumigants are less toxic to humans than the toxicants employed in general fumigation, there is always considerable danger involved in their use. Some are colorless and odorless and act as an anesthetic when inhaled, with obvious dangers. Certain fumigants have explosive properties, and should never be stored on the premises.

Other characteristics are burning and blistering of the skin when spilled thereon, and severe irritation to the eyes and respiratory tract. Under no circumstances should a general fumigation or the application of extremely toxic fumigants be undertaken by anyone but a licensed professional fumigator. *Only* experienced and well trained plant personnel should be permitted to handle spot fumigants.

The effectiveness and safety in using fumigants will be in direct proportion to the air tightness of the equipment treated. Old methods such as saturating flour sacks are unreliable, dangerous and passé. Modern methods include the use of "dripolators" or pressure spraying.

Spot fumigants must be *applied to, held within,* and *released from* the equipment in such a manner

that minimum exposure to the gas is encountered. A halide leak detector can be used to locate leaks in the equipment under fumigation. Wearing an approved gas mask and rubber gloves is a suggested precaution. Your fumigant manufacturer or distributor can help you establish a safe and effective program.

Rodenticides

Over the years, thousands of types of baits and poisons of every description have been utilized in an attempt to control rodent infestation. Without exception all have proven to have definite limitations.

Some of these poisons are so deadly that a single drop will cause death in a few seconds. There are as yet no federal restrictions established as to the sale and use of these deadly rodenticides, which can be purchased by *anyone* in drug, hardware and other supply sources. Therefore it cannot be emphasized too strongly that you *must know what you are dealing with* and consider carefully the consequences involved.

In view of the extreme dangers of some rodenticides and the limited effectiveness of others, it is advisable to devote the major part of your program to trapping. A fairly new rodenticide, known as warfarin, appears to have remarkable possibilities, and is relatively harmless to humans.

Warfarin, properly used with locked bait stations, offers a permanent, safe and continuous control program. Thus, by "rodent proofing" the premises, intelligent trapping and warfarin as an adjunct, a safe, effective program can be maintained.

Storage of Pesticides

The numerous basic chemicals and combinations thereof, used in insecticides, fumigants and rodenticides are distinguished by technical nomenclature, and further identified by hundreds of brand and trade names usually confusing to the layman. These substances embrace a wide range of toxicity and dangers, from relatively "safe" materials to deadly poisons.

Therefore, in the interests of safety, one person should be assigned the responsibility for their safe handling and storage. All drums, containers and sprayers should be painted red, and their contents, uses and hazards clearly marked on each container . . . regardless of the manufacturer's label. These materials should always be kept under lock and key, dispensed only by the person charged with their safe-keeping, and used only by authorized trained members of the sanitation staff.

Toxic substances in the hands of uninformed and untrained plant personnel, unnecessarily incur the risk of serious injury through their improper or indiscriminate use and frequent or excessive exposure. This can run the gamut from lesser injuries such as burns, blisters, irritation of the eyes and respiratory system, dermal infections and general debility, to manifestations of acute or chronic poisoning, with possible legal con-

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sequences, or the loss of valuable man-hours.

Inferior sprays formulated with low grade ingredients, harsh base oils and toxic components are a contaminative menace and can impart a penetrating and contaminating taste and odor to raw materials and processed foods.

Remember this . . . if you don't have these poisons on the premises or permit them to be used in your plant, you will be in a better position to refute claims of contamination or injury, and this, in the long run, is your best defense. Whenever in doubt, consult the sanitation department of your industry association, or other qualified sources.

Volumes have been published, much of which may be an old story to those actively engaged in sanitation. Much of it, however, is couched in technical phraseology, difficult for employees of operating level to digest. Consequently, there is a great need for an educational program, reduced to simple terms.

In conclusion, it should be thoroughly understood that no pesticide is a substitute for good housekeeping. There are no miracles, no short cuts, no substitutes for intelligent cleaning procedures.

Study your plant. Don't wait until insects are observed before spraying. Set up a vigilant inspection schedule, which after all is the only successful way to ascertain the effectiveness of your program. These are basic principles in preventive sanitation.

Three-Fingered Menace

—From page 29

tract, Arlington Chemical Company) to 469 Highway employees. Two injections of 0.1 cc were given subcutaneously in the deltoid region to each employee—an interval of two weeks intervening between injections. This was done on a voluntary basis, and no pressure or persuasion was used to have the employee avail himself of this prophylactic measure.

These inoculations were given during the latter part of April and the early part of May 1951.

Of the 1312 permanent employees not inoculated, there were two lost-time cases of poison ivy, the lost time of the two cases totaling 23 days. It must be remembered in evaluating these figures that this program was entirely on a voluntary basis. For the most part, the men availing themselves of the inoculations were men who knew themselves to be sensitive to poison ivy and had, in previous years, been affected while many of the men not receiving the inoculations either were not highly sensitive or their work did not bring them into contact with the plant.

These temporary men were for the most part college boys hired for the summer who were not used to this type of work and exposure and in almost every case insufficient time elapsed between their inoculation and exposure to poison ivy to build up any immunity.

Table I is a summary. It is evident that the greatest amount of time was lost by the temporary employee group. This may well be due to several factors; viz, their inexperience, the fact that their skin was not hardened by exposure to the elements, and insufficient time between their inoculations and exposure.

Table II gives lost time statistics for a four-year period. The last two years the inoculations were available. A protective solution, Ply No. 9 (Milburne Company), has been available for a three-year period and its use advocated by the Safety Division.

Summary

I do not believe that this work has produced conclusive evidence of the value of poison ivy extract in the protection of our Highway Department employees against Rhus dermatitis. The controls in this experiment are far from ideal, and the over-all results far from what we might hope for. I do feel, however, that the results are promising enough to continue the use of poison ivy extract over a longer period of time so that we may amass a larger number of cases with the hope that from this we may draw some definite conclusions.

To reduce the number of cases of poison ivy, we have made use

of every protection available. The poison ivy plant has been destroyed by uprooting or by the use of chemicals in so far as practical. The workers have been educated in ways and means of protecting themselves. Protective solutions have been used as well as prophylactic injections of poison ivy extract. Any success we have attained must be attributed to all of these factors, and at present it is impossible to give the proper amount of credit to each of these protective measures.

It is noteworthy that we have witnessed no untoward effects from the use of subcutaneous injection of 0.1 cc poison ivy extract (Arlington) phophylactically. Due to the absolute alcohol vehicle, there is a short-lived sting on injection. There is occasionally some local erythema at the site of the injection, but nothing further so far as we have been able to observe.

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Obituary

—From page 70

1941 he became safety supervisor for the entire system.

Mr. Stewart was a member of the American Institute of Electrical Engineers; chairman of the Accident Prevention Committee, Edison Electric Institute, and secretary of the Public Utilities Section, NSC. He was also the American Gas Association's representative to the American Standards Association.

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Film on Chemical Safety

A scene from the motion picture, "Plan to Live." Note grounding of drums, also grounding connections for drums and safety can to be used in dispensing.

PLAN TO LIVE, a 16-mm., sound, black and white motion picture recently produced by the Audio Visual Center, Indiana University, Bloomington, Ind., carries important points on safe practice for research chemists and chemical workers in industrial plants.

From the research laboratory to the pilot plant operator to the production worker, the film emphasizes responsibility for observing safe practices and the use of available equipment for protection.

Planning safely really begins with planning the plant layout, and the continuity of planning safely is maintained from experiment to final production.

The film shows both items of personal protection, such as goggles, masks, gloves and garments, and those provided as part of plant equipment, such as exhausts and hoods, explosion-proof switches and lamps, machine guards, fire extinguishers and safety showers.

Safety instruction in the film is centered around the story of a young graduate chemist who obtains a research position with a large chemical company. The brief-

Exhaust ventilation for mixing toxic materials. Mixer and hood are both portable and can be set up and connected where needed.

ing he has received from the professor at the university is followed by detailed on-the-job instruction from the laboratory supervisor at the plant.

The supervisor points out the chain of safety responsibility which links the building superintendent, the research chemist, and the chemical production worker. A link in this chain broken through poor planning, faulty instruction or negligence can endanger not only the individual but also fellow workers, and even an entire community.

Selected sequences for the film were photographed at the plant of Eli Lilly & Company, Indianapolis. Running time of the picture is 18 minutes.

Personals

Inland Products Names Winter Safety Director

RAY E. WINTER has been appointed safety director for Inland Steel Products Company, Milwaukee, Wis. He was formerly safety engineer for General Electric Co., X-Ray division, Milwaukee.

Active in national safety circles for the past 11 years, Mr. Winter is a member of the executive committee of the Power Press and Forging Section, National Safety Council. He is a member of the American Society of Safety Engineers.

His background includes experience with the safety and training divisions of Froemming Brothers Company and Kearney & Trecker Corp., of Milwaukee, and the Atomic Energy Commission, for which he did research work on industrial air-sampling techniques.

He has been active in local safety affairs, helping to organize a Milwaukee chapter of the Associated General Contractors Safety Schools. He is a panel member of the Milwaukee Association of Commerce Safety school and is a past executive committee member of the West Allis Industrial Safety Council.

—*To page 116*

Guardian of health

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Safety Library

—From page 58

Resuscitation

Back-Pressure Arm-Lift Artificial Respiration. By Heinz Specht. Public Health Reports. April 1952, p. 380.

Pole Top and Other Manual Resuscitation Methods. By Archer S. Gordon and others. Industrial Medicine and Surgery, April 1952.

Regulations

Employers Urged to Protest Federal Control Over Industrial Safety Practices. The Monitor-Associated Industries of New York State, March 1952. p. 12.

Safety Movement

The Bureau of Labor Standards Program of Industrial Safety. By Olive E. Clapper, Monthly Labor Review, March 1952, p. 249.

Transit Industry

Medical Care in a Surface Transportation Company. By Harold Brandaleone and Gerald J. Friedman. Industrial Medicine and Surgery, April 1952, p. 174.

Green Cross News

—From page 50

appointed to work with the Field Organization in building the program for the Annual Managers Conference to be held in Chicago in October ahead of the Congress. Joseph M. Kaplan is chairman of this group, with members Robert B. Leopold and Paul F. Stricker.

Two local and one state safety organization were recommended for affiliation as Chapters under the Conference plan and favorable action will be asked at the next meeting of the NSC Board. The organizations are the Philadelphia Safety Council, the Greater Youngstown Safety Council and the Connecticut Safety Commission, the latter a state group.

A special committee was also appointed to study the possibility of making a NSC film to tell the story of what a local safety council is, how it operates and what it actually accomplishes, for use in selling the Council to the community and for financial procurement campaigns.

A representative group consisting of 15 of the 16 members of the Procedures Committee attended the meeting, which was held at the

Sheraton Hotel. The managers present were, Walter D. Ladd, chairman, St. Joseph, Mo., J. James Ashton, Wilmington; Harry H. Brainerd, Pittsburgh; George M. Burns, Kansas City; Dr. B. L. Corbett, Milwaukee; Walter L. Fox, Syracuse; Estel Hack, Louisville; H. G. J. Hays, Cleveland; W. Russell Hicks, Hamilton; Reyburn Hoffmann, St. Louis; Joseph M. Kaplan, Los Angeles; Iver C. Larson, San Francisco; Robert B. Leopold, Atlanta; Harold F. Lillie, Lansing and Paul F. Stricker, New York. Managers Ladd, Larson and Stricker are the Conference representatives on the NSC directorate.

A preliminary meeting of the special committee on the Retirement Income plan was held Thursday afternoon in order to make specific recommendations to the entire committee on Friday. Robert R. Snodgrass of Atlanta, vice president for Local Safety Organizations, attended the meeting. Chairman Ladd presided.

Fashions for Safer Living

Two capacity audiences attended the "Fashions for Safer Living" show, held recently at the Sheraton Hotel in Worcester (Mass.), sponsored by the Worcester County Safety Council's Home Division. The afternoon program featured a fashion show that ran two hours, demonstrations of first aid, home defense, electrical safety, fire prevention, and child and school safety, followed by a movie. The evening program included a hair style show and the "Institute for Safer Living," a packaged audience participation safety quiz show. Six hundred attended the afternoon program and 500 were present at night. The purpose was to introduce certain types of packaged safety programs and to interest more women in Council work. More than 600 women's organizations in city and county were contacted.

New Car for Estel Hack

The Board of Directors of the Louisville Safety Council recently expressed its appreciation of the work of Manager Estel Hack, by presenting him with a new automobile. The auto was given, not as a "safety car" or for Council business, but as a personal gift for

ANOTHER SAFETY DAVIS DIVISION FIRST-AID "FIRST"!

Davis, originator of the D-Carton First Aid System, pioneers another long-felt first aid need—a dressing that can be applied easily and quickly with one hand by the injured person himself.

Impregnated with a newly developed adherent substance the bandage with cotton lined 2" x 2", or 2" x 4" gauze pad stays put without slipping or unwinding.

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- Self-adhering—does not adhere to skin
- No tearing, no cutting, nothing to tie
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- Packaged for the Davis D-Carton System
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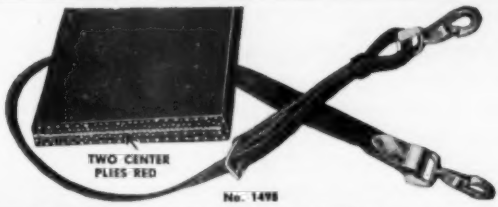

No. 1498

NEW! BUHRKE NYLON SAFETY STRAP —ULTRA FLEXIBLE

Light weight, SAFE, uniform flexibility—even at —38° F.—strap remains soft and pliable; in 2 styles, No. 1018 with slide buckle, and No. 1498 (above) with tongue buckle. Made of NYLON FABRIC 1¾" wide, 6 ply. Full cross section breaking strength over 3,000 lbs., buckle hole strength over 900 lbs. SAFE to use until RED PLY appears. Complete controlled fabrication of strap in our plant. Write...

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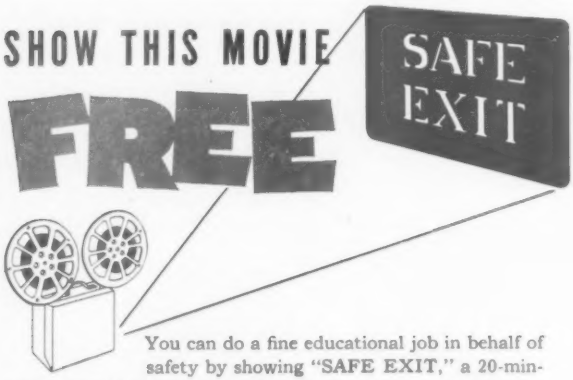
use by the manager and his family. The presentation was made at the regular Board meeting in April.

Handbook for Board Members

A Board Member's Handbook, 56 typewritten pages, was recently distributed to members of the governing board of the Oklahoma City Safety Council to provide detailed information on the Council's work. The policies of the organization as adopted during the five years since it started, are set forth and essential statistical information provided. The articles of incorporation and the by-laws, with the financial status and other essential data are also included. Manager Dan Hollingsworth believes that the booklet will be most helpful in giving the complete story of what a safety council is, how it functions and what it accomplishes.

Organization Progress

Potential new NSC Chapters in various stages of organization were reported at the recent meeting of the Procedures Committee of the Conference of Local Safety Organizations in Chicago. Definite progress with initial organizational steps was reported for Asheville, N. C.; Buffalo, N. Y.; Macon, Ga.; Miami, Fla.; and Muskegon, Mich. Some new developments were also reported for state organizations in California, Montana, New Hampshire, Oregon, Washington and Wyoming.



You can do a fine educational job in behalf of safety by showing "SAFE EXIT," a 20-minute, 16 mm, black and white sound movie, prepared for you—*absolutely free*—by the makers of Von Duprin Fire and Panic Exit Devices.

"SAFE EXIT" is a true public service film—not a product story at all—dramatically filmed and edited for the layman to understand—and benefit by. Use this film as the basis for a lively safety program in your plant.

You pay nothing—not even postage—to show "SAFE EXIT" in your community. Simply fill out and mail the handy booking request below.

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VON DUPRIN DIVISION
Indianapolis 9, Indiana

Date .....

YES, we wish to show the 16 mm, sound, B & W movie, "SAFE EXIT."

Date Desired: ..... or .....
(PLEASE LIST ALTERNATE)

Type of Audience: .....
(SCHOOL, LUNCHEON CLUB, TRAINING, ETC.)

Expected Attendance .....

We understand film is absolutely rent-free, postage paid.
We agree to return film the day following our showing.

Organization .....

Authorized by .....

Address .....

City ..... State .....

Von Duprin PANIC DEVICES ASSURE SAFE EXIT ®

Distinguished Service

—*From page 62*

National Distillers Products Corp., Hill & Hill Plant, Louisville, Ky.

National Distillers Products Corp., Peoria Division, Peoria, Ill.

National Distillers Products Corp., W. & A. Gilbey, Ltd., Cincinnati, Ohio.

North American Rayon Corp., Elizabethton, Tenn.

Otis Elevator Co., Hamilton Works, Hamilton, Ontario, Canada.

Perfect Circle Corp., Hagerstown Plant, Hagerstown, Ind.

Republic Steel Corp., Warren Plant, Warren, Ohio.

CERTIFICATES OF COMMENDATION

Atlas Powder Co., Giant Works, Giant, Calif.

Atlas Powder Co., Reynolds Works, Tamaqua, Pa.

Atlas Powder Co., Senter Works, Houghton, Mich.

Atlas Powder Co., Stamford Works, Stamford, Conn.

Atlas Powder Co., White Haven Works, White Haven, Pa.

Canadian Industries, Ltd., Office Building Employees, Montreal, Quebec, Canada.

M. E. Cunningham Co., Pittsburgh, Pa. (Entire company).

The Erie Stone Co., Huntington, Ind., Plant.

Marshall Field & Co., Fieldcrest Mills Division, Electric Blanket Mill, Spray, N. C.

France Stone Products, Inc., Spencer, Ind., Plant.

The General Cigar Co., Inc., Division St., Kingston, Pa.

The General Cigar Co., Inc., Valley Plant, Kingston, Pa.

General Electric Co., Lamp Division, Bucyrus Glass Works, Bucyrus, Ohio.

General Electric Co., Lamp Division, Dover Wire Works.

General Electric Co., Lamp Division, Glass Machine Works, Cleveland, Ohio.

General Electric Co., Lamp Division, Glass Technology Laboratory, Cleveland, Ohio.

General Electric Co., Lamp Division, Jackson Glass Works, Jackson, Miss.

General Electric Co., Lamp Division, Logan Glass Works, Logan, Ohio.

International Milling Co., Clay Center, Kansas.

International Milling Co., Greenville, Texas.
International Milling Co., New Prague, Minn.
International Milling Co., Wabasha, Minn.
International Milling Co., Salina, Kansas.
Marathon Corp., Ashland Division, Ashland, Wis.
National Distillers Products Corp., Carthage Distillery, Cincinnati, Ohio.
National Distillers Products Corp., Old Crow Distillery, Frankfort, Ky.
Joseph E. Seagram and Sons, Inc., Blair Distilling Co., St. Francis, Ky.
Joseph E. Seagram and Sons, Inc., Julius Kessler Distilling Co., Fairfield, Ky.
Joseph E. Seagram and Sons, Inc., Old Farmers Distillery, Athertonville, Ky.
Spencer Kellogg and Sons, Inc., Chicago, Ill.

Small Businesses and Associations

—*From page 42*

for the benefit of 95 per cent of the employers of longshoremen and other related crafts in the Port of New York and will help protect some 43,000 shipping employees who work along the 600 mile waterfront.

The New York papers gave this excellent publicity during the Greater New York Safety Conference. We hope that the Association's action may inspire others to follow suit.

One for All and All for One

The Founders Mutual Casualty Company of Chicago recently signed up for the Council's "Group Service Membership" and, on June 1, will start redistributing a complete package of administrative and employee materials to 96 small companies insured by them. If any program succeeds this should, because their safety engineers not only will give excellent personal service, but will see that the Council's materials are used to best advantage. This is probably the first case on record where a well rounded safety service was set up for this many companies at one time. It will be interesting to see the results a year from now!

Lost Time Accidents Cut 84 Per Cent

Factory Management and Maintenance magazine in February carried an article about a 500 employee plant which reduced acci-

BLAW-KNOX GRATING

Electroforged into rigid, one-piece panels.

Twisted cross bar prevents slipping.

...GIVES BETTER SERVICE ON 5 COUNTS

1 SAFER FOOTING
2 GREATER STRENGTH
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Bring your open steel flooring problems to Blaw-Knox for expert help. Bulletin 2365 sent on request.

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Use DAV-SON Cork Back Bulletin Boards for pinning up notices, letters, photos, etc. Many sizes and styles available for your particular requirements.

Write for Special Circular

We manufacture the famous DAV-SON Changeable Letter Bulletin Boards, Safety Displays, Lobby Directories and Name Plates for every purpose.

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dents from a frequency rate of 11.60 in 1949 to 1.88 in 1950—a reduction of 84 per cent.

The article credits the success of the program to "one year of careful, but not costly, safety work, sparked by the company's joining the National Safety Council."

We liked that so much that we got permission from the magazine to reprint the entire article. If you want a copy just write to the Industrial Department of the Council.

Portable Power Chain Saws

—*From page 36*

the angular cut with the axe. (Figure 3-C.) From the standpoint of safety there is little choice between these methods.

26. For proper control of the tree it is important to remember that the undercut should be at least *one-third* of the diameter of the tree, and the undercut removed before the back-cut is started, so that the tree will fall straight and not slab or kick back. The undercut should be high enough to permit the tree to lean 20 degrees from the vertical before closing.

27. In some logging areas it is customary, in timber under 18" on the stump, to make a V-shaped undercut with the top cut horizontal and the bottom cut angling upward toward the back of the horizontal cut, making a wedge that will fall out by itself. (Figure 3-D.)

Falling the Tree

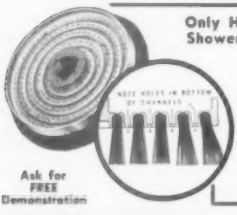
28. After the undercut has been sawed, the saw should be *stopped*, or the clutch disengaged; and if the ground is level and unobstructed, the saw should be carried around to the opposite side of the tree by two men. If, however, the work is being done on a side hill or very rough ground, it may be safer to swing the tail stock end around, pivoting it on the motor end. A path of retreat should be laid out and understood prior to the start of the back- or falling-cut.

29. It is necessary to side notch before the back-cut is started if the tree is larger than the length of the saw. (Figure 3-E.)

30. Normally when the back-cut approaches the undercut the saw should be cutting parallel to the back-cut. During the early part of the cut it is customary to "corner" (cut on alternate sides). The tree will then hinge on a small section of "holding wood" along the undercut and fall straight. If either end of the fast cutting saw "leads" and cuts away the holding wood on one side, the tree will tend to fall in the direction of the remaining holding wood.

31. If the tree is a "leaner," it is important to leave more holding wood away from the "lean" to pull the tree in the direction desired (Figure 3-F) and in timber over 18 inches on the stump to always corner on the back-cut. "Cornering" involves cutting through the sap wood on both sides to discourage slabbing. Even trees without much lean should be cornered, since it insures safer, cleaner cutting and prevents the

Scrape off hard-caked grease and dirt ...scrub away dangerously slippery oil with this one powerful HILD Floor Machine! With Power-Scraper attachment the Hild Machine breaks up packed grease deposits...saves hours of tedious chipping away with a hand-spud. And, it's *so much easier* on your floors. No danger of marring the surface or of loosening wood blocks. To remove oil film or slippery grease, use the HILD Machine as a Shower-feed Scrubber. It's equally speedy and thorough in open areas and in the "danger spots"... around, beneath and between machines. Use the same versatile Hild Machine for office floors also...to wax, polish, buff, sand, grind or steel-wool floors of all kinds.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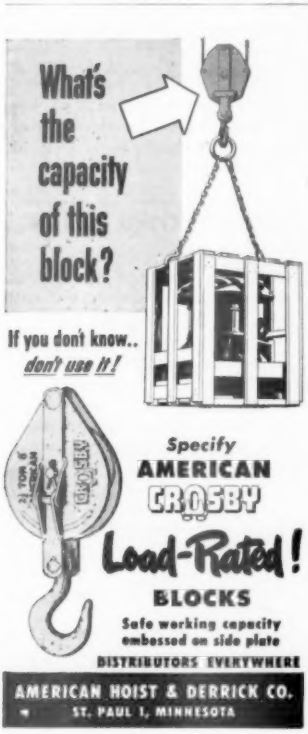
tree from pulling part of the stump. The back-cut should be started on the side of the tree and the sap wood cut through. The saw should then be quickly worked around in the cut to the other side.

32. If the tree has a heavy lean in the direction it is to be felled, it should be given an *extra large undercut and the sides notched* as shown in Figure 3-F to prevent slabbing or splitting up from the stump.

33. If the tree settles back after the saw has fully entered the cut, it may bind on the chain at the back and may cause the whole machine to kick violently in the direction of the operator. If a tree has a tendency to bind it must be wedged. Great care should be taken. The saw must be stopped while wedging is being done to prevent the running chain from striking the wedges. Wooden or magnesium wedges should be used since they are lighter to carry and will not damage the cutting chain beyond repair if driven too deep.



Nor will they throw steel splinters which might cause eye injuries.

Moving Away from Tree

34. Men operating power saws often hold the saw and stay near the base of the tree when it falls. This practice should be absolutely prohibited. When the tree starts to fall, the power should be shut off and the saw should be laid on the ground at the base of the tree.

35. The operators should then move back quickly over a prearranged route at a 45 degree angle to the direction of fall, and place themselves behind other trees if possible or should face the tree. They should get back at least 20 feet. They will have ample time if they plan their escape in advance.

Springboards and Use of Pole

36. The fast, easy cutting of power saws makes it possible to cut low stumps. Thus, use of springboards or a forked pole to hold the tail stock end is not usually necessary except on unusually steep ground. Springboards should never be used for chain power-saw falling if it is at all possible to do without them. A forked pole to hold the tail stock or "stinger" end is preferable for high reaching. It enables the fallers to stay on the ground and beyond reach of the saw chain. A pole with a ring on the end (Figure 5) is safer than a forked pole since it not only enables the faller to hold up the tail stock, as he can with the forked stick, but also permits him to pull down and guide the saw as well as if it were held in his hand.

37. Since use of a pole creates an additional hazard from flying sawdust, fallers using one should wear goggles. If the man at the motor end must work from a springboard, he should never attempt to adjust it while standing on it and holding the saw. He should always have a springboard long enough to enable him to stand at the end of the saw, never at one side.

Warning to Nearby Men

38. The falling of a tree by power saw consumes so little time

GLAMOUR GLASSES

Extraordinary Features

Introduced a little more than a year ago, these unusual Industrial glasses are now rendering service in plants from coast to coast. They are greatly preferred by workmen because they have every appearance of expensive prescription glasses. Just consider these features:

(1) Transparent amber color has the glamorous appearance of prescription glasses. (2) Flat steel spring, ¼" wide, embedded in demi-plastic moulded paddle-type temples. (3) Ends of temples are grooved or serrated to add comfort. (4) The embedded spring in the temples may be bent to fit the face and keep the glasses firmly in place. (5) Optical hinges. (6) Each pair supplied with tuf plastic leather-finish case.

No. 603-Men's size. Large, easily replaced 48 x 51 m/m Drop Eye Clear XL Hard 1.25 or 6.00 Diopter curve lenses.

No. 604-Women's size. Regulation 44 m/m drop oval (42 x 45 m/m) lenses. Also available with Green Sel Hardened lenses.

Industrial Spectacles with Side Shields

Nickel frame, plastic covered temples, adjustable perloid nose pad, 50 m/m diopter round lenses in five types. (1) Clear 1.25D XL Hardened, (2) Sel Green 1.25D Hardened, (3) Clear Flat Heavy, (4) Clear Flat Sel Safe Laminated, (5) Clear Flat Sel Hard.

No. 3001—Perforated leather side shields

No. 3002—Wire screen side shields

No. 3003—Solid green acetate side shields

Order from your dealer or write us direct for sample pairs on memo for inspection purposes.

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that ample warning should be given to other men *before* the back-cut is started. If a man is in the danger zone when the cut is started, he does not have time to escape to a place of safety. The fallers should give a loud warning, then wait momentarily for an answering shout, because they cannot hear a shout after starting their cut. The head faller *must* establish with certainty that no one is in the danger area of the tree to be felled, and must know at all times the position of any person he knows is in or about the danger area.

39. This procedure should be made known by special instructions and posters to all employees who may be in the woods. They should also be warned to keep out of the territory where trees are being felled. Anyone who must go into that vicinity should notify the head faller who should make sure that everyone is in the clear before starting to fall a tree.

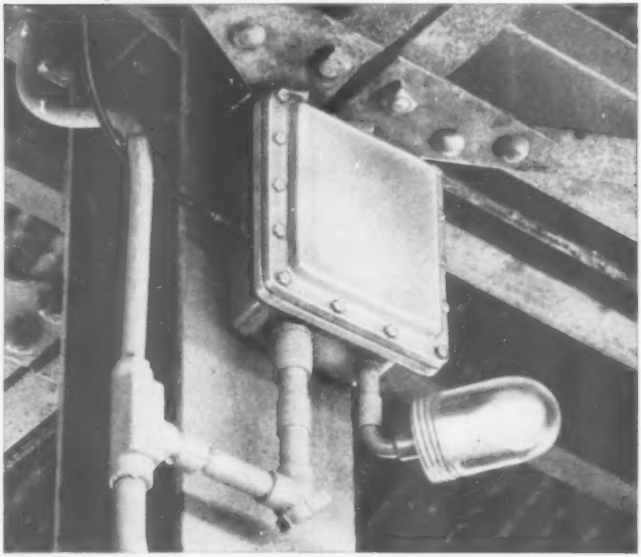
40. The bull bucker (supervisor of fallers and buckers) should be responsible for so placing the fallers and buckers that they will not be working dangerously close to one another. The head faller should stop work immediately and report to the bull bucker whenever crews are working too close together.

Bucking

41. The many hazards of bucking heavy timber are all present in power-saw bucking. In addition, the cut is made much faster. The bucker must foresee exactly what is going to happen when the cut is completed, and careful training and supervision are required.

42. Another factor affecting the safety of the bucker is that the weight of equipment in his hands hinders a quick getaway when the cut is completed. He must therefore work in a spot where he will not be struck by the log he is bucking or by other logs which may be dislodged by it. It is sometimes advisable to block or prop up the log to prevent it from rolling. In some instances it is safer to complete a cut with a hand saw rather than with the power saw.

43. The bull bucker or other person supervising this work has the responsibility for the safety of his men. It should be understood



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No bulk plant should be without them. Positive indication for greater protection against static electricity at loading racks and chemical terminals.

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***SURE**—be POSITIVE that some wiring break, rust or carelessness is not causing a faulty ground which can lead to FIRE!

***SIMPLE**—installed in the normal grounding circuit, Gilbarco's indicator gives "go ahead" by means of light or audible signal *only when positive ground is established.*

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Gilbert & Barker Mfg. Company
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BUCKING WITH POWER CHAIN SAWS

1. Plan each cut before you start the engine.
2. Choose your workplace so you will not be struck by the log you are cutting or by other logs it may dislodge.

3. Clear away stones, earth and bark so chain can't throw them in your direction.
4. Stand with legs well apart or stand to one side of machine. If kickback occurs you will not be struck on legs.
5. When possible, all underbucking should be done with the cutter chain in inverted position.
6. Complete the cut with a hand saw if it will be safer.
7. If a cut cannot be made safely, report the condition to foreman.
8. Never endanger other men by leaving logs incompletely cut.

Study the handbook for your saw

SAFETY INSTRUCTION CARD **No. 783**
National Safety Council

Figure 6.

POWER CHAIN SAW OPERATORS

Fire Prevention Rules:

1. Do not smoke while filling gasoline tanks.
2. Use a gasoline can with a spout or use a funnel.
3. Fill the tank only on an area of bare ground.
4. Use proper gasoline and oil mixture to minimize carbonization.
5. Do not start the motor where the tank was filled.
6. Keep the entire saw clean of gasoline, oil and sawdust.
7. Be sure the muffler is in good condition.
8. Keep the spark plugs and wire connections tight.
9. Keep a fire extinguisher with the power saw.
10. Clear flammable material away from point of saw cut.

Promptly extinguish any fires that may be started. Report fires and possible causes of fire to foreman immediately

SAFETY INSTRUCTION CARD No. 785
National Safety Council PRINTED IN U.S.A.

Figure 7.

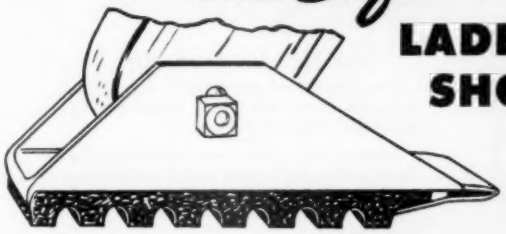
that if a situation looks unsafe, the bucker should notify him and receive instructions as to how the log may be cut safely. If it appears that it cannot be cut safely where it lies, it should be skidded to a more advantageous position or cross logs should be cleared away or other necessary steps taken to make the job safe.

44. If a log is lying flat against the ground at the point where it is to be cut, stones, bark, and earth should be sufficiently cleared that the chain will not throw them in the direction of the operator. Should it be necessary to back out of a cut with a two-man saw, make sure that the engine end is anchored to the ground while the man on the idler end of the saw applies the upward pressure. This will prevent kickback of the engine and possible injury to the operator. Wherever possible, the engineman on the two-man saw should stand with legs well apart while making bucking cuts. Then if a kickback occurs unexpectedly, the engine will not strike the operator on the legs.

One-Man Saws

45. This type of equipment is finding increased use for falling, bucking and limbing. Some operators feel that its light weight and greater maneuverability will elim-

Safe WORK with Safe-Hi LADDER SHOES



Ladders were made to lean, and leaning ladders tend to slip. Attach Safe-Hi Ladder Shoes and work safely—at any height.

SAFE-HI

Ladder Shoes have a four-way grip:

1. **Rubber tread holds on any dry surface.**
2. **Cord filling in tread grips wet or oily surface on which rubber will slip.**
3. **Ridges across the line of slippage, get a firm hold on the surface.**
4. **Self-sharpening spike for ice or snow.**

Spike walls of soft steel welded to a core of hard tool steel wear away first, making Safe-Hi Shoe Spikes self-sharpening. Fit *all* your ladders with SAFE-HI LADDER SHOES.

See your safety dealer or write

SPECIFY Safe-Hi PRODUCTS and get that extra safety margin

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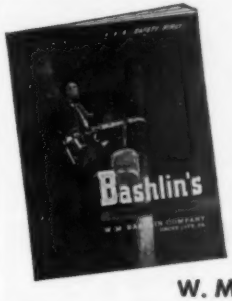
710 Club Bldg., Denver, Colo.
• SAFETY BELTS • LADDER SHOES
• POLE GRIPS • WALL GRIPS • CHISEL GRIPS
LIFELINES & LANYARDS



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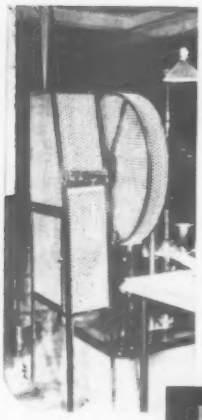
Ever heard that expression? Trouble is, when the heat's got him it means wasted man hours that cost you money!

Fairway Salt Tablets save you that money by replacing body salts lost in sweat . . . and remember, Fairway Enteric Coated salt tablets are for those "salt sensitive stomachs!"

Send NOW for StaSafe Salt Bulletin No. 513!

100% Salt uncoated . . . Comb. Salt and Dextrose uncoated.
100% Salt Enteric coated . . . Comb. Salt and Dext. Ent. coated.

STANDARD SAFETY EQUIPMENT COMPANY
232 W. Ontario St., Chicago 10, Ill.



When you have a Guard Problem-

Use **H & K** standardized **SAFETY GUARD PARTS**

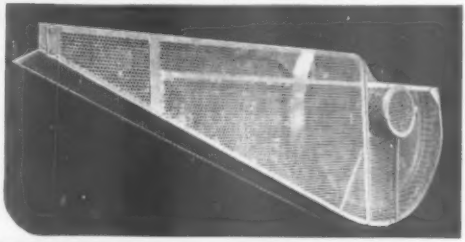
Sturdy - Low Cost - Safe!

Your own maintenance personnel can make any size or shape of Guard for the protection of belts, gears and moving parts from these "UL" approved parts at a saving—no special tools required. Our perforated angles and bands are reinforced at corners with our gussets to make the framework which is covered with sturdy perforated sheets. For floor mounting detachable floor posts and sockets provide easy removal.

Properly constructed, your guards will prove sturdy, permanent fixtures with smooth surfaces and good visibility and ventilation. They will be readily approved by safety inspectors. Ask for complete information.

Also Available

H & K Metal strips with slotted perforations especially designed for construction of sturdy punch press guards.



5645 Fillmore St.
Chicago 44, Ill.

114 Liberty St.
New York 6, N. Y.

The Harrington & King PERFORATING Co.

inate the strains and falls sometimes resulting from the use of the heavier two-man saw.

46. However, due to its light weight, there may be a tendency for the operator to swing the saw up from the ground. This may result in a back strain or a "glancing blow" accident.

47. Before starting this saw, the workmen should be sure that the chain is not touching anything because there is no tail stock to keep the free end of the chain bar off the ground.

48. When a one-man saw is used to fell a tree, great care must be taken not to cut into the undercut with the outboard end of the cutting rail. This is easy to do because the operator cannot see around the tree. Once the saw has cut into the undercut the operator has lost control of the fall of the tree. The tree will spin off the stump and the operator may be injured.

Care of Saws

49. Success and safety in the operation of chain saws depend a great deal upon the care and service given them. Maintenance should be made the responsibility of one man, who should be given special training by the manufacturer. He should work under the supervision of a responsible executive, such as the supervisor of falling and bucking.

50. Chains should not be repaired in the woods. Extra chains should be carried, and when a chain gets out of order it should be taken off the saw and returned to the shop for service. When chains must be carried to or from the job, they should be rolled up and carried by a rope or wire or in a special carrying case to protect the men carrying them from cuts.

51. Skill and experience will prolong the life of chains. Men will learn to recognize situations in which the chain saw will become quickly dulled. If, for example, blasting has been done in the vicinity so that particles of stone are embedded in the bark, the bark should be cut away with an axe before the saw is used.

Grounding Electrical Equipment

52. Every electrically operated chain saw should be grounded. The danger from a machine frame which becomes energized when a man is handling it and standing on wet ground with calked boots is considerable. It is simple to ground the equipment by means of a wire attached at one end to the frame of the machine and at the other to a rod driven into the ground deep enough to reach moist earth.

53. Electrically operated saws should be connected through a switch and fuse to the power source. Motor control should be through a dead man switch. The power cable should be inspected at frequent intervals and any defects repaired.

Gasoline Motors

54. On gasoline saws the exhaust should be directed so it doesn't blow toward the operator. The operator should be instructed to pull the starting rope away from his body. If he pulls the rope toward himself he runs the risk of having it swing around his head and perhaps strike his eyes. He should never wrap the rope around his hand. The motors, themselves, should be given the necessary care to make them easy to start. This will help protect the men from strains, sprains, and bruised knuckles.

Prevention of Fires

55. Gasoline should be taken out to the job in a substantial capped can painted red and labeled "gasoline." The can should have a suitable spout for pouring gasoline into the tank, or a funnel should be provided for this purpose. *Under no circumstances* should the gasoline tank be replenished *while the engine is running*. Any gasoline spilled on the tank or engine should be carefully wiped off before starting the engine. A forest fire may be started if gasoline is used carelessly or is spilled.

56. Smoking should be prohibited while men are filling gasoline tanks. Additional precautions to prevent fires are:

a. Fill tank only on an area of bare ground.

b. Use proper oil and gasoline mixture to minimize carbonization.

c. Do not start motor at place of filling tank.

d. Keep entire saw clean of sawdust, gasoline and oil.

e. Keep muffler in good condition.

f. Keep spark plugs and wire connections tight.

g. Keep a filled fire extinguisher with the power saw at all times.

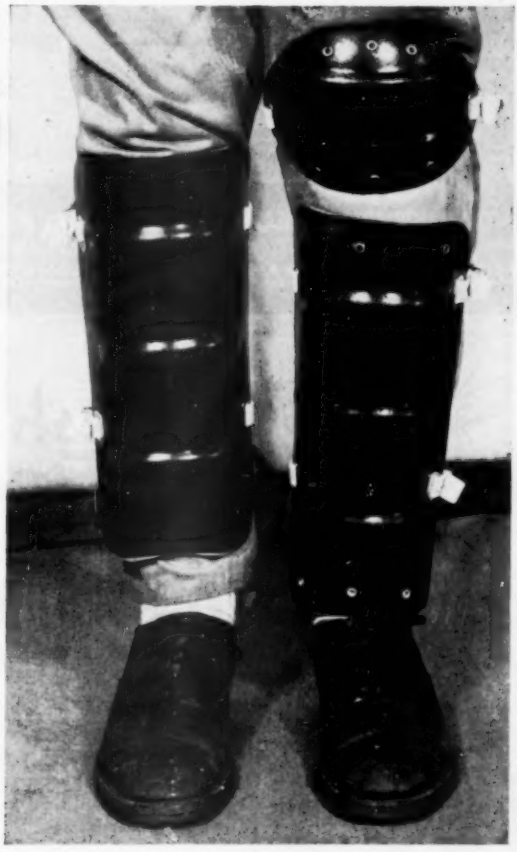
h. Clear flammable material away from point of saw cut.

i. Extinguish any fires that may be started promptly. Report any fires and causes to foreman immediately.

Protective Clothing

57. Men operating chain saws and carrying them through the woods must be surefooted. In Pacific coast forests where the ground is covered with fallen timber, good sharp calked boots should be worn. In other sections hobnailed shoes are preferable, and in the winter rubber soled

SANKEY'S PROVIDE MAXIMUM PROTECTION



WHY WAIT FOR AN ACCIDENT?

Write today for descriptive literature or a trial pair of Sankey's Knee-Shin or Shin Guards constructed of light weight, durable, strong fibre with soft sponge rubber padding.

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Stop Brow Mopping!

SAVE
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Try KOOLPAD

INEXPENSIVE . . . Cellulose sponge SWEATBAND that absorbs forehead perspiration . . . keeps eye glasses and goggles free from sweat streaks or fogging. Eliminates "Brow Mopping." Adjustable Headband . . . Two Models . . . Washable!

Costs less than the ordinary pocket handkerchief that you use to mop your brow.

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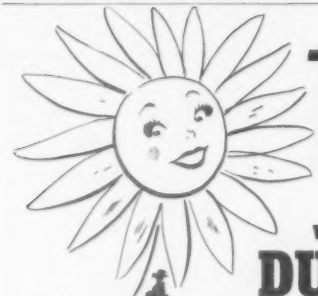
LOS ANGELES 16, CAL. 1952 CRENSHAW BLVD.



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wear a
DUPOR No. 24
the Respirator that is U.S.B. of M. Approved for Type A Dusts

More than 24 sq. in. twin filter area. Sanitary face cloth. Soft rubber face mask. Has all patented DUPOR features. Greater visibility . . . no blind spots! Can be worn with goggles or glasses.

Sample sent $3.00 — pp

H. S. Cover Fog-Proof, Gas-Tight Goggles for use with above respirator--$2.00 pp.

H. S. COVER, South Bend, Ind.

shoes. Among the most common accidents are falls, so the wearing of footwear to minimize this hazard should be mandatory. Hard toed safety shoes and boots are a good investment for members of the cutting crew. Low shoes should never be worn. They invite sprained ankles, snake bite and poison ivy.

58. *Hard hats should always be worn by fallers and buckers and others working in the woods.* Heavy deadwood is often lodged in the branches of trees high overhead and out of sight. Inability to hear well because of exhaust noise makes it especially important that hard hats be worn. Many men have been killed by falling wood and many lives have been saved by hard hats. *Their use should be mandatory.*

59. When a faller is holding the tail stock end of the saw over his head, he should wear goggles to protect his eyes from flying sawdust.

60. In locations infested by mosquitos, loggers often wear mosquito netting covers inside their hard hats, and in places where extreme cold is encountered in winter they wear stocking caps or similar protection under their hard hats to protect the head and ears.

Compliance with Safety Codes

61. Where state safety codes on the use of chain saws exist, they should be consulted and followed. Compliance with state electrical codes should also be strictly observed.

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Stovall, Charles: The Manual for Fallers, Buckers, Scalers, Bull Buckers. *The Timberman*, Portland, Oregon, 1944.

United States Department of Agriculture Forest Service: *Snag Falling with Hand and Power Saws*, Washington, D. C., 1943.

Manuals and catalogs of saw manufacturers.

ACKNOWLEDGMENT

This data sheet was revised by the Wood Products Section of the National Safety Council. The generous help of the many members and officers of other interested sections who submitted suggestions is gratefully acknowledged.

New England Thrift Recognizes Value of Pittsburgh COLOR DYNAMICS

G. S. Blodgett Company, of Burlington, Vermont, internationally-known makers of commercial ovens, puts color to work to increase production efficiency and make working conditions safer and better.

How Pittsburgh COLOR DYNAMICS benefits workers and management alike is once more demonstrated by the experience of the G. S. Blodgett Company, of Burlington, Vermont, manufacturers of commercial baking and roasting ovens for more than a century.

● **Recently** the Blodgett Company erected a new factory building. It was painted according to COLOR DYNAMICS. By using this modern system colors were chosen for functional as well as decorative purposes.

● ***Focal* colors** were painted on operating parts of machinery and *eye-rest* colors on stationary parts to aid workers to see their tasks better and to reduce eye-fatigue. Walls were painted light green to provide additional eye-rest areas. *Safety* colors were used to reduce accident hazards. Ceiling colors were chosen to provide better light reflection.

● **The highly satisfactory results** achieved by the use of Pittsburgh's system of COLOR DYNAMICS are best summarized in this letter from Robert F. Patrick, President of the Blodgett Company:

● **"It was our aim** in painting the interior of our new factory building to provide a more pleasant atmosphere for our workers, give them more natural light and at the same time simplify housekeeping.

● **"Everyone agrees** that our efforts have been very successful. We have more natural light than we ever thought possible – we seldom use artificial lighting. Our employees tell us that the new color arrangement is helpful in relieving eye strain. Naturally, this is responsible for increased production efficiency.

● **"We are now** in our 104th year of uninterrupted manufacture of commercial ovens. I can assure you we have never made them in an atmosphere which has been more helpful and pleasant."

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Why not try COLOR DYNAMICS in your plant—on a machine or two, or in one department—and see the difference it makes in quality and volume of production? We'll be glad to make a scientific color engineering study for you of your entire plant, or any part of it, without cost or obligation to you. Call your nearest Pittsburgh Plate Glass Company branch and arrange to have one of our COLOR DYNAMICS experts see you at your convenience. Or mail this coupon.

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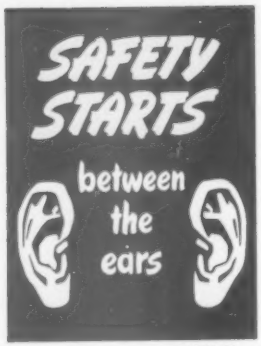
safety POSTERS

MAKE THE MOST OF IT!

THE 1952 Directory of Occupational Safety Posters contains miniatures of 744 posters which are in stock. ***These are top-notch selections on a great variety of subjects.*** Copies of the Directory have been sent to all National Safety Council industrial members. Additional copies are available at 50 cents each — write to Membership Dept., N.S.C.

Posters miniatured on this page and the two following are NEW — produced for the first time this month. Excepting the Jumbo poster (below, left) all will be in stock throughout 1952 — the same as those previously published in 1952 issues of the NEWS. The posters shown in black-and-white on the two following pages are actually printed in two or more colors.

MAKE THE MOST OF YOUR POSTER SERVICE by selecting from the brand ***new*** posters shown on these pages each month ***and*** from the hundreds of illustrations in the 1952 Directory.



9619-C 25x38

Above new "C" poster, issued monthly, is indicative of the other two color posters —shown in black and white on the following pages and in the 1952 Poster Directory.

JUMBO POSTER for JULY 1952

The Jumbo poster, issued monthly, is designed for outdoor use and is available to members on annual subscription but is not stocked. Its actual size is 9' 11" by 11' 8".

9569-A $8\frac{1}{2}$x$11\frac{1}{2}$

This new four color poster is illustrative of the 72 four color posters shown in the 1952 Poster Directory.

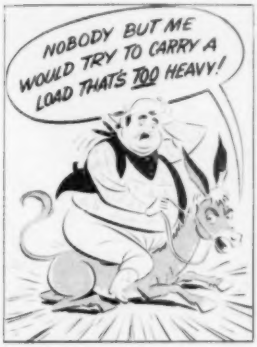
Electrotypes of poster miniatures on this page are not available, nor can payroll inserts be supplied.

Posters below are printed in two or more colors

(Available only in sizes indicated)

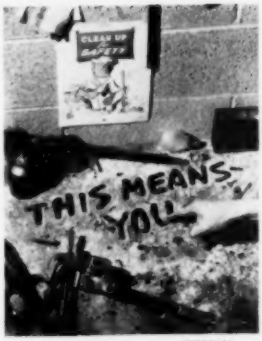
NATIONAL SAFETY COUNCIL

9591-A **8½x11½**



NATIONAL SAFETY COUNCIL

9599-A **8½x11½**



NATIONAL SAFETY COUNCIL

9583-A **8½x11½**

NATIONAL SAFETY COUNCIL

9532-B **17x23**

NATIONAL SAFETY COUNCIL

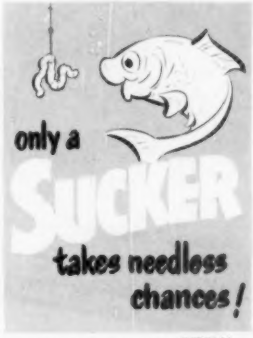
9568-A **8½x11½**

NATIONAL SAFETY COUNCIL

9567-B **17x23**

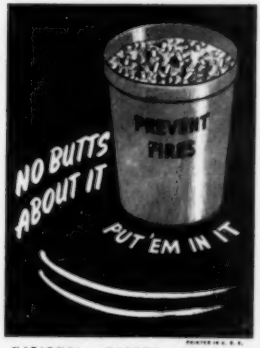
NATIONAL SAFETY COUNCIL

9499-A **8½x11½**



NATIONAL SAFETY COUNCIL

9581-A **8½x11½**



NATIONAL SAFETY COUNCIL

9559-A **8½x11½**

Electrotypes of payroll inserts can be furnished on all poster illustrations shown above.

Posters below are printed in two or more colors

(Available only in sizes indicated)

NATIONAL SAFETY COUNCIL

9585-A 8½x11½

NATIONAL SAFETY COUNCIL

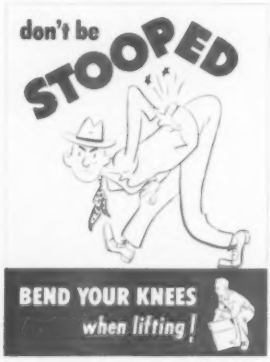
9562-A 8½x11½

NATIONAL SAFETY COUNCIL

9486-A 8½x11½

NATIONAL SAFETY COUNCIL

9556-B 17x23



NATIONAL SAFETY COUNCIL

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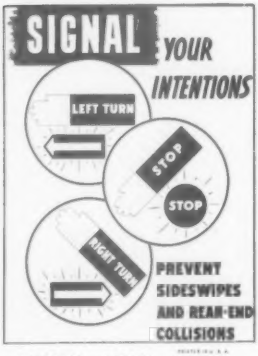
NATIONAL SAFETY COUNCIL

9450-B 17x23



NATIONAL SAFETY COUNCIL

V-9574-B 17x23

NATIONAL SAFETY COUNCIL

V-9576-B 17x23

NATIONAL SAFETY COUNCIL

V-9575-A 8½x11½

Electrotypes of payroll inserts can be furnished on all poster illustrations shown above.

Data Sheets

Data Sheet D-U. 3, "Windups and Letoffs," which appeared in the April issue of NATIONAL SAFETY NEWS has been reprinted and is now available. The data sheet, prepared by the Rubber Section, is a good discussion of the hazards encountered in winding and unwinding sheet stock commonly handled in rolls.

The data sheet on carbon monoxide, D-Gen. 50, which appeared in the May issue of NATIONAL SAFETY NEWS, has been reprinted. Prepared by the Industrial Department Editorial Staff, this data sheet contains a comprehensive discussion of carbon monoxide poisoning and first aid. There is also a good discussion of hazardous industrial operations and the provisions necessary to make them safe. The illustrative material has been augmented in the reprint.

Member price: Data Sheets, 1 to 9 copies, 17¢. Write for quantity prices.

Two New Safety Reprints

Safety Reprint General 30, "This Safety Program Cut Lost Time Accidents 84 Per Cent," reprinted from *Factory Management and Maintenance*, describes the safety program initiated by the Chicago Division of the Stone Container Corporation about two years ago. The results are clear cut. Lost-time accidents dropped 84 per cent, minor injuries dropped 25 per cent, insurance premiums became smaller, and the company won the top award for its division of the National Safety Council's Industrial Safety Contest. Here's a success story everyone interested in the tangible results of a safety program should read.

Safety Reprint General 31, "Tinted Optical Media," first appeared in the NATIONAL SAFETY NEWS. It presents the views on the much debated subject of tinted glasses of a subcommittee of the Joint-Committee of Industrial Ophthalmology, representing the American Academy of Ophthalmology and Otolaryngology and the Section of Ophthalmology of the American Medical Association. The subcommittee feels that sunglasses "should be worn only when the intensity of light produces discomfort, . . . the penalty for their wear otherwise is the reduction of the individual's tolerance to bright light." With respect to mildly tinted lenses designed for constant wear, the committee has no objection to their use but does not "agree that they offer physiologic advantage over crown glass for use under fluorescent lighting or other lighting situations." This article probably won't settle the debate, but it certainly merits the attention of everyone interested in the subject.

Member price: Safety Reprints, 1 to 9 copies, 10¢. Write for quantity prices.

Operation Safety

Vacation time is just around the corner and, in plants throughout the nation, employees are busily engaged in planning activities for the eagerly awaited annual holiday.

For many, vacation plans will include an automobile trip with its attendant traffic hazards, and no one engaged in plant managements needs to be reminded of the aftermath of man-hour losses resulting from vacation-time traffic accidents. The traffic accident toll shows up spectacularly in

The National Safety Council's new traveling exhibit which was on display at the Greater New York Safety Convention, April 1-4. Designed to answer questions of members and non-members, the display features Council publications and programs in the Industrial, Traffic and Motor Transportation, School, Home and Farm fields, as well as for public information and community safety organizations.

In the above photo, W. G. Johnson, (fourth from left) is explaining methods of developing technical information to officials of Consolidated Edison Co. of New York: A. Augustus Low vice-president; Arthur W. Wallender, assistant to the president and former New York police commissioner; W. F. Brown, safety director, and T. J. Shaughnessy.

The exhibit was also displayed at the Western Pennsylvania Safety Conference in April and is scheduled for the Midwest Safety Show May 6-8, Central States Safety Conference May 27-29; Western Safety Conference June 16-18, and Ohio State Safety Conference September 16-18.

plants that shut down for a general vacation period. But it is just as costly, though less noticeable, when vacations are spread over a longer period of time.

Plant officials looking for materials to get across to their employees the importance of safe vacation driving will find the National Safety Council's Operation Safety kit for July an invaluable aid. The July theme is Vacation Driving, and, although prepared primarily for community safety educational purposes, the materials offered in the kit can easily be adapted to plant off-the-job safety programs.

The July leaflet *Alert Today, Alive Tomorrow*, which hits the high points of safe holiday driving, makes an excellent payroll stuffer. The poster of the same title will effectively carry the safety message on bulletin boards within the plant and at entrance and exit points at plant parking lots. Operation Safety's one minute film trailers may be used effectively to follow up showings of other films to personnel.

In addition, the kit contains other materials that lend themselves well to plant adaptation. There are four news releases that can, with minor changes, be used in employee publications. Another effective tool may be found in the radio spot announcements which furnish good material for public address systems throughout the plant.

Samples of these and other materials, prices and information on the complete Operation Safety program, may be obtained from the National Safety Council.

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ONOX SPONGE RUBBER FOOTMAT

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Men like Onox • It relieves tired, aching feet

Modern research has upset the old theories about Athlete's Foot control. Skin specialists now say that the best chance of preventing Athlete's Foot is to improve the condition of the skin. *That's what Onox does.* Onox mineral salts toughen the skin and make it resistant to fungus growth. No fungus growth—no Athlete's Foot.

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We will ship prepaid your trial order for any amount of Onox and footmats. *You pay nothing* unless fully satisfied after 60 days' use.

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Big Event in Oak Ridge

—*From page 56*

reau of Mines first aid certificates within the Carbide-operated Atomic Energy facilities.

To stimulate employee interest in industrial first aid, intra-plant contests were begun early in the program. Later, as Carbide assumed responsibility for operating the Y-12 plant and the Oak Ridge National Laboratory in Oak Ridge, the competitions were broadened to include all three of the Oak Ridge facilities. The new Atomic Energy plant in Paducah, Ky., which is also to be operated by Carbide was brought into the program in 1951 and walked off with first prize in the 1951 Meet.

In the 1951 First Aid Meet, a total of 10 first aid teams met under the floodlights of Blankenship Field in Oak Ridge to compete before a large audience of employees, visitors and Oak Ridge residents. Indicative of industrial interest in this activity is the fact that representatives of the iron and steel industry, the coal mining industry, the copper and zinc mining industry and the cement industry, came from many states to observe this competitive event. Also present were government representatives from the Bureau of Mines and other government offices throughout Virginia, Kentucky, Tennessee, West Virginia, Alabama and other southern states. Judges for the events were drawn from the safety departments of industrial concerns

throughout the area and included many men in executive capacity. Chief judge for the meet was C. H. Dodge, of the U. S. Bureau of Mines.

In addition to stimulation of interest in first aid training, competitive events of this kind bring many secondary benefits including the strengthening of relations between employees and the company and the improvement of community relations. A further result is the drawing together of industrial management within an area in a common effort to improve training in industrial first aid and reduce hazards on the job.

Ionizing Radiations

—*From page 25*

to be two or three millimeters for the beta radiation from the radioactive isotopes and several centimeters for the radiation from a high-powered betatron.

Neutrons have very great penetration in tissue because they have no charge and produce very low specific ionization. They do produce some ionization and can be harmful, as has been shown recently by a number of cases of cataract in cyclotron workers who have exposed their eyes directly to neutron beams.

As a result of exposure to excessive amounts of ionizing radiation nine general types of injury have been recognized.[1] These may be listed as follows: (1) x-ray dermatitis; (2) induction of tumors; (3) leukopenia; (4) leukemia; (5) anemia; (6) bone necrosis; (7) glandular disfunction; and (8) fetal injury.

Since each of these types of radiation injury has been attributed to various types of radiation and since they do not normally all appear in the same individual, there must be some variation in the type of injury produced by the same radiation depending upon the amount received in any one dose, the number and frequency of the doses, and perhaps also depending upon the particular indi-

[1] Henshaw, P. S.: Biologic Significance of the Tolerance Dose in X-Ray and Radium Protection. Journal of the National Cancer Institute, 1:789-805 (June 1941).

None Finer at Any Price!

GOLD MEDAL LADDERS and TRESTLES

Platform Ladder

Extension Ladder

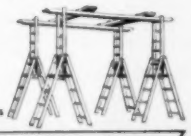
Single Ladder

Cost Less Per Year . . . Because They Last Longer

For safety's sake it pays to buy the best. Your men can do more and better work on safer equipment. Gold Medal Ladders and Trestles, made in a large, modern, ladder plant, are backed by more than seventy years of experience. They're stronger, safer, and withstand hard usage years longer.

TYPES AND SIZES FOR EVERY NEED

Underwriter Step Ladder



Wood Trestles

Write for new Catalog L-71 of ladders and scaffolding accessories.

GOLD MEDAL LADDERS & SCAFFOLDING

for Greater Safety...Efficiency...Economy

THE PATENT SCAFFOLDING CO., Inc.

38-21 12th St., Dept NSN—Long Island City 1, N. Y.

LADDERS and SCAFFOLDS for ANY PURPOSE ANY TIME — ANY PLACE

SEE YOUR CLASSIFIED TELEPHONE DIRECTORY FOR NEAREST OFFICE

For Greater Health Protection

Install Bradley Sanitary MULTI-STALL Showers

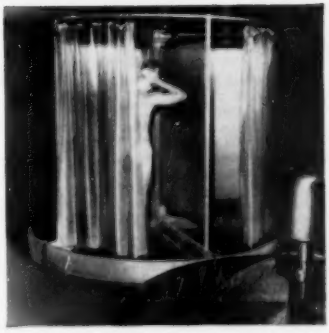


Illustration of Bradley 5-Stall Shower Unit with receptors for installation on any type of floor including wood. Bradley Washfountain in foreground.

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vidual who receives the dose.

X-ray dermatitis is ordinarily the first thing to be seen as the result of over-exposure to radiation of almost any sort. The dermatitis is characterized by rough, dry skin, wartlike growths, and dry brittle nails. It usually appears first on the fingers and hands because they are ordinarily the most exposed part.

Bone necrosis is very similar in form and in causation to the dermatitis. It has been produced many times by over-exposure to the medical fluoroscope, primarily through the failure of radiologists to wear proper personal protective equipment while handling the machine.

While sterility and glandular disfunction are usually listed as separate entities, they probably should be considered the same since this type of sterility is the result of a glandular disfunction or non-function. The question of human sterility as the result of radiation exposure has not received the study which it really deserves but one study of medical radiologists[2] showed that they had a significantly smaller number of children than comparable physicians in other specialties.

The above types of injury are probably most commonly produced by the local irradiation of a particular tissue with a comparatively concentrated dosage. The remaining types are more apt to be produced by whole body irradiation at very low levels and for a long time. They are the conditions which are apt to develop insidiously in the industrial use of ionizing radiations and which may be easily overlooked until serious harm has been done. Leukemia is the most studied of these conditions. It has been shown[3] that the leukemia rate among radiologists for the 15-year period prior to 1944 was ten times that among physicians not engaged in radiology. Radiation anemia due to damage to the bone marrow has been studied very closely as one of the results of whole body irradiation in the atomic bomb blasts.

In addition to these relatively well known and well understood effects there is the possibility of direct fetal injury and of hereditary changes in the germ cell. Very little is known about human heredity in any case and it is most difficult to develop anything about this particular peculiarity in human heredity but it is known from animal experiments that radiation has produced large numbers of mutations and that there is no evidence of a threshold limit on these mutations. In other words, a small dose produces a few mutations and a larger dose produces more and there is no limiting factor.

This type of injury has never been considered in calculation of the tolerance dose which should be prescribed for workers around radiation processes. Since we are all exposed to an appreciable amount of cosmic radiation at all times and this certainly produces some mutations it is a question as to how much difference a small amount of other ionizing radiation would make and it is also an unanswerable question at the present time whether or not an increased mutation rate would be desirable.

The question of a tolerance dose has had a considerable amount of study ever since the first suggested tolerance dose in 1902. It has been a continuous project of the protection committees of the various radiological societies since the permanent committee was set up by the British in 1915 and the American Roentgen Ray Society in 1920. These committees were organized to provide a protection which would prevent "visible injury to the superficial tissues, derangement of the internal organs and changes in the blood" and the first requirement was to set up a value for the maximum amount of radiation which could be absorbed without producing these harmful effects even if the exposure were long continued or frequently repeated.

The unit of measurement chosen

[2] Hickey, P. M., and Hall, E. W.: A Report Analyzing the Results of the Questionnaire Sent Out to Radiologists: under the direction of the Sex Committee of the National Research Council. American Journal of Roentgenology 18:458-462 (1927).

[3] March, H. C.: Leukemia in Radiologists. Radiology, 43:275-278 (September 1944).

for expressing the amount of exposure is rather unique in that it expresses an effect rather than a quantity. The roentgen is defined as the amount of x or gamma radiation which will produce one electrostatic unit of electric charge in one cubic centimeter of air under standard conditions. This unit applies properly to only x-radiation or gamma radiation but it has been applied to the ionizing particles by introducing the new units known as the roentgen equivalent physical or the roentgen equivalent man indicating the quantities of the other types of radiation which have the same ionizing effect on air or the same biological effects on man as the roentgen of x-radiation or gamma radiation.

Since this unit is in terms of energy absorbed per unit volume or mass of tissue it makes a great deal of difference in the actual dose absorbed what part of the body is exposed to the radiation. A total dose of 1,000 roentgens applied to a single finger would have much different effects than a total dose of 1,000 roentgens applied to the whole body, for instance. The tolerance dose has always been calculated in terms of roentgens of whole body radiation applied over repeated daily doses for a long period of time.

In view of the difficulty of calculating such things there has been remarkable unanimity in the permissible maximum for a long time. The suggested dose was two-tenths roentgen per day in 1925 and has since been revised downward twice, once to one-tenth roentgen per day in 1946 and again to three-tenths roentgen per week in 1949 which is now generally accepted.

Calculation of the permissible dose of external radiation is, however, considerably easier than calculation of the permissible dose of internal radiation since the dose of internal radiation depends upon the rate of elimination of the particular substance which is being ingested as well as upon its physical half life or rate of producing ionizing radiation. These values have, however, been calculated for a number of isotopes and for air, water, and food for a number of periods of exposure.[4]

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External radiation can be kept down to a reasonable value by keeping a sufficient distance away from the source, putting shielding between the person and the source and by reducing the time of exposure. Reduction of time of exposure and increasing of distance from the source should be practiced as much as possible. Whether shielding or distance is used, it is always a compromise insofar as the electromagnetic radiations are concerned since their intensity falls off by a logarithmic law and no thickness of shielding is going to be sufficient to completely eliminate x-rays, gamma rays, or cosmic radiation. It can only reduce them to a value which will be reasonably safe. The standard shielding material is lead.

Because it is often convenient, particularly with x-rays from sources of relatively low intensity to use building materials other than lead as shields Figure 2 shows the thicknesses of some other building materials equivalent to the quantity of lead required for protection against x-radiation of various relatively low potentials.

Protection against the primary beam and this is not necessarily the whole story of protection against ionizing radiation since at every point of penetration of matter the radiation sets up a secondary radiation which, in the case of high energy primary beams may be quite penetrating and quite damaging radiation in itself.

Figure 2 indicates the manner in which secondary radiation may upset the calculations for radium protection. It indicates a completely shielded source indicated by "S," giving off a primary beam defined by the heavy black lines which impinges on an object in another completely enclosed cubicle. The arrows from various directions represent secondary radiation arising from the building material in the second cubicle.

Under a situation such as indicated here the amount of radia-

[4] Morgan, Karl Z.: The Meaning of Atomic Energy and the Hazards Associated with It and with the Use of Radioactive Materials. Transactions of the 37th National Safety Congress, Volume 6, pages 30 to 38 (1949).

tion occurring as secondary radiation might be equal to or greater than the total radiation in the primary beam. For this reason it is always necessary to have protective devices checked by someone experienced in their construction and also to have each installation monitored with radiation detecting devices when it goes into operation and periodically thereafter.

Personnel working around sources of radiation should also carry personal radiation monitoring devices which may be either portable ionization chambers carried on the person or sensitive films with measuring echelons on them.

These monitoring devices are available from a number of commercial organizations who will take over full responsibility for reading them and providing a permanent record of the exposure received by each individual.

In the handling of radioactive materials the prevention of internal hazards is apt to be more difficult than protection against external radiation exposures. The radioactive materials may be introduced into the body by ingestion, inhalation or direct absorption through cuts or abrasions. Prevention of such contamination is a dust control problem but one very much different from the ones with which industry is familiar since it is known that as little as one microgram of stored radium can produce serious injury and not more than one-tenth microgram is considered the limit. In order to determine the type of precautions which should be taken in handling these materials an arbitrary division of radiation intensities as proposed by H. A. Levy[5] will serve as a guide. The quantity of material in this case is given in terms of curies, the unit of radiation intensity as this is the customary unit of measurement of radioisotopes.

With activities up to one millicurie it will be possible to handle materials for tracer experiments with only the customary precautions taken in the handling of

[5] Levy, H. A.: Some Aspects of the Design of Radio Chemical Laboratories. Chemical and Engineering News 24:3168 (December 10, 1946).

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chemicals. In order to assure against the possibility of some of the activities being concentrated in the laboratory the area should be monitored periodically.

In the range from 1 to 500 millicuries shielding and special handling equipment is necessary and monitoring and periodic decontamination of all locations and operations are required. At activities above 500 millicuries permanent shielding and remote control handling apparatus permanently installed are required and continuous monitoring of all operations should be carried on.

Any radio chemical laboratory operating in the millicurie or higher levels should be constructed and equipped with a view to easy decontamination and to relatively easy isolation of the processes involving high activities and high rates of exposure.

One of the most vital problems in handling materials producing ionizing radiations is the disposal of radioactive waste materials. One cannot assume that such materials will be sufficiently diluted if they are simply emptied down the drain. Under some circumstances burying of waste products may also be highly hazardous. This would be especially true if they were buried in a place where the materials could pollute the underground waters leading to a public water supply.

The best solutions up to now appear to be to dilute solid or liquid wastes with sufficient volumes of non-radioactive isotopes of the same element to reduce the activity below the hazardous levels or to concentrate the wastes to a small enough volume that they can be buried in containers, usually concrete blocks, which will erode away very slowly and thus release their activity to surrounding waters at a very low rate.

Many of the radioactive waste products may be gases or vapors which will be emitted to the air. These, if they are above safe levels, should be filtered or absorbed from the waste air stream and their disposal should be considered as carefully as the disposal of any other radioactive waste material.

For companies getting radioactive materials from the Atomic Energy Commission there is advice and instruction available at the Commission. If the radioactive material comes from other sources which are not under control of the Commission, advantage should be taken of the same courses of instruction and advice or of the courses of instruction for protective measures in radioactive situations which are available from several of the large university research centers.

Army Looks at Safety

—*From page 74*

problems arise constantly. So, if a local safety engineer is confronted with a problem in the field of, let us say explosives, he can request help and an engineer thoroughly familiar with explosives safety will assist him in its solution.

With these special concepts of army safety in mind, let us turn to our third topic—safety in a large military industrial plant, the Atlanta General Depot. This installation includes operations of six of the army technical services, namely, the QM Corps, the Ordnance Corps, the Engineer Corps, the Signal Corps, the Chemical Corps, and the Medical Corps. Each of the technical services have their over-all technical mission which they perform under the direct instructions from their own technical service chiefs in Washington. As Depot Commander, I am responsible for the over-all administrative activities of the Depot, including all phases of the safety program.

As I have pointed out before, staff supervision of our safety program is under the Third Army Commander and his safety director. Also, each technical service has safety problems peculiar to themselves, so if a problem arises in a storage, warehousing or maintenance field that our depot safety organization cannot solve, they not only have the assistance of the Third Army safety organization, but can call on the safety director of the Quartermaster Corps, Ordnance Corps, etc., for any particular technical service problem.

The safety director at our depot is not under the direction of any

operating official or superintendent: he is on my staff. He reports directly to me, and I'm sure you will agree that this is the proper organizational setup. He acts as by eyes and ears in the conduct of accident prevention, although naturally all final orders must come from my office. Now that doesn't mean that he's running to me with every little problem that comes up, but does cross-check major policy decisions. Most of the corrections of unsafe methods or unsafe conditions are effected verbally right on the spot, which is as it should be.

We have a rather extensive organization of safety committees at the Depot, beginning with foremen's sub-committees in the various activities, and which handle safety at the worker's level. They meet monthly; minutes are prepared and sent to the Safety Director. A representative of the Safety Office is present at each meeting, but does not conduct it. The employees do this themselves.

Following the foremen's meetings, each operating activity has its own sub-committee which also meets monthly and is presided over by the operating chief. Minutes of these meetings are also sent to the safety director.

Finally, the General Safety Committee meets each month. This consists of the operating heads. The safety director prepares the agenda, and I preside as chairman. This committee is the highest echelon; it does not concern itself with intra-activity affairs, but considers broader subjects, establishes policy, and decides on matters involving sizable expenditures or serious changes in procedures.

A general depot differs considerably from the average military post. One notable difference is in the fact that we have more civilian than military personnel. I believe it safe to say that ours is perhaps the largest industrial operation in the Atlanta region. So it will be seen that our safety program, at least for the civilian industrial employees, is very similar to that of any large industrial organization.

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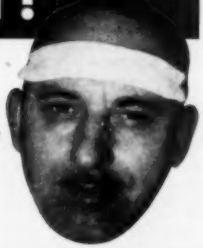

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In passing I might say that it was a source of much gratification to find, shortly after I assumed command, that the Atlanta General Depot has been honored by the Army Award of Merit for Safety, which was given for reduction in accident rates in all three categories — military personnel, civilian personnel and motor vehicle.

Security regulations prevent mentioning numbers of disabling injuries and hours of exposure, and of course neither has any value without the other. But I can say that our frequency rate for military personnel was reduced 30 per cent in 1950 under 1949; for civilian personnel 31 per cent; and for motor vehicle accidents 42 per cent. We are especially glad to report no fatalities last year.

And if anyone believes that safety does not pay dividends, let me point out that the entire cost of our safety program—salaries, equipment, travel, posters, and all that goes into it—did not reach the sum of $20,000 for any of these years. It would be very profitable if all activities paid a return on the same basis.

It is pretty well known that because of the great strides safety has made in industry, the worker is considered to be twice as safe at his job as in any other phase of his life, whether it be at his home, his recreation, or even strolling along the sidewalk window-shopping with his wife. The accident experience of military personnel at the Depot is even better than that; they are about *three* times as safe at *their* jobs. Last year our over-all frequency rate for military personnel was 6.9, whereas the rate of accidents on their jobs was 2.3.

To you folks who are responsible for safety in your organizations, let me ask you this. Can you estimate what your frequency rates would be if you had to include all the things that could and do happen to a group of thousands of young men averaging perhaps 20 years of age, full of zip and animal spirits, who do classwork or shop training all day, and spend their leisure time playing softball, football, baseball, basketball, and all the other sports? Just good-natured scuffling and horseplay account for some injuries; last season we had six resulting from football, even though our teams have expert coaching and top-notch equipment.

And try to picture the activities of these young fellows while away from the Depot on pass or leave. If you had to include all these things in your own accident records, what do you suppose your frequency rates would be? Are we guilty of complacency if we feel that the rates I've just mentioned are not bad? I am well aware of the fact that even one accident is too many, and we have no inclination to rest on laurels. Our orientation meetings, safety training, poster program, and all the other safety propaganda, will continue and will be stepped up or improved as we find ways of doing so.

In view of all this, I believe that if the parents and families of these young men were aware of the protection that surrounds them, of the thought and study that is given to their safety while in the service, worries regarding the welfare of their boys would be considerably reduced. Perhaps the one field in which we fail in not giving the Army Safety Program the publicity it should have.

Army safety directors and engineers take an active part in the affairs of all cooperative and public safety groups, such as the National Safety Council, and regional bodies such as this, the Southern Safety Conference. They are prominent in the studies and deliberations of the American Standards Association.

In December 1949, President Truman, by Executive Order No. 10194, established a Federal Safety Council composed of representatives of Government Departments and Agencies.

The new Council, lodged by Executive Order in the U. S. Department of Labor, takes over the responsibilities of the Federal

Inter-Departmental Safety Council, which for many years had been charged with the job of providing advisory safety services to Federal agencies.

Stemming from this are Federal Safety Councils in about 15 of the larger metropolitan centers and consist of the safety personnel of all Federal agencies in those localities. These Councils meet monthly, and their object is the exchange of ideas, techniques and experiences, as well as study and research on various problems. In them, safety personnel of the Army assume their share of the work and responsibility, and derive their share of the benefits.

Since the inception of the safety movement some forty years ago, its development and growth has been principally in the larger industries. It would be difficult nowadays to find a large, successful business organization that did not have an efficient, aggressive safety program. Similarly, many of the smaller concerns have good safety programs, but not enough of them. It is a well-known fact that of late years the main field for improvement has been with the smaller organization. But no matter how *small* or *remote* an Army establishment may be, the *same* safety program is in effect.

I have given you a brief review of the Army Safety Program. It had to be brief, since it would require hours to describe it adequately. Suffice it to say that it reaches into every Army activity and to each individual. These young men (women, too) enter our ranks by the thousands; while they are in the Army they receive safety indoctrination and training continuously. Now, in the natural course of things, it must be expected that not all of them will remain permanently in the service; great numbers will return to civilian life. And much of the safety training they receive will remain with them!

In all probability a certain percentage of them will become connected with small businesses where there may have been no previous interest in safety. Similarly, a certain portion will inevitably become leaders in business or other groups in their localities. Is it reasonable to suppose that the in-

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It is common fact that excessive sweating slows down the body's normal processes. To alleviate this condition and restore production to normal, place a Hav-aLift Dispenser near the water cooler. Hav-aLift Regulated Salt Tablets will prevent nausea and digestive disorder which might occur by taking plain salt tablets.

Hav-aLift comes in sturdy 750 and 1500 dispensers with either plain salt or salt and dextrose tablets.

THESE DEALERS CARRY A COMPLETE STOCK

ALABAMA—Birmingham, Guardian Safety Equipment Co.
CALIFORNIA—Los Angeles, Charles E. Morton Co.
GEORGIA—Atlanta, Bates Surgical Supply; Savannah, Wachtels Physicians Supply Co.
ILLINOIS—Chicago, William V. MacGill & Co.
INDIANA—Fort Wayne, Brink & Wiseman Inc.; Indianapolis, Koppelmeyer Safety Co.; Indianapolis, Midwest Fire & Equipment Co.; Vincennes, West Safety Equipment Co.
KENTUCKY—Louisville, Orr Safety Equipment Co.; Louisville, Robert L. Schmitt Co.; Louisville, Doak's Surgical Supplies, Inc.
MARYLAND—Baltimore, L. A. Benson Co.
MICHIGAN—Detroit, Ferrill-Schank Co.; Detroit (Ferndale), Michigan First Aid; Kalamazoo, Safety Services Inc.
NEW JERSEY—E. Orange, New Jersey Safety Equip. Co.; Newark, Safety Specialists.
NEW YORK—Buffalo, Jeffrey-Fell Co.; Rochester, Rochester Safety Equipment Co.
OHIO—Akron, Acme Safety Products; Akron, Akron Welding & Spring Co.; Cleveland, Radebaugh-Fetzer Co.; Toledo, Acme Safety Products.
OKLAHOMA—Tulsa, Guardian Safety Equipment Co.
PENNSYLVANIA—Philadelphia, General Scientific Co.; Philadelphia, Miller & Bear; Philadelphia, Guardian Safety Equipment Co.
TENNESSEE—Chattanooga, Fillauer Surgical Supplies, Inc.; Chattanooga, Industrial Supply Co.
WISCONSIN—Janesville, Brusan Products Co.

Mfd. by A. E. HALPERIN CO., INC., BOSTON 18, MASS.

doctrination they received in the Army can have an ever-widening effect like ripples from a stone tossed in the water? Somehow I feel that if the Army Safety Program produced no other benefit than this spreading of safety indoctrination, it would still have well justified its effort and expense.

I started out with the subject, "The Army Looks at Safety," and I hope I've made it clear that the Army does more than look. Perhaps I should have discarded that subject and substituted "*You* Look at *Army* Safety," because that is pretty much what we have done.

One of your slogans that has gained prominence is "The Life You Safe May Be Your Own." Did it ever occur to you that the life you save might well be a future Washington, a Pasteur, an Edison, a Lincoln, an Eisenhower?

For my own inspiration at least, I have taken the liberty of paraphrasing your slogan to:

The life you save today, may be the one that saves our country tomorrow.

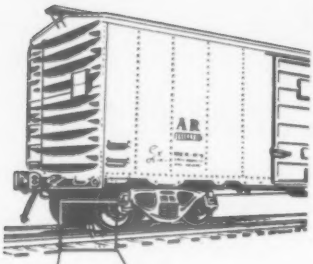
Out of Darkness

HOW IT FEELS to have been born blind and lived in a dark world to the age of 19 was dramatically told to a Denver audience recently by a man who had the experience. He was George Campbell from Oklahoma City, addressing the American and Colorado Societies of Safety Engineers, gathered in session at the Gates Rubber Company Roof Garden cafeteria.

People who can see have no idea what a dismal life it is for a blind person—especially one born blind, he said. The only impressions such a person can have are those which come through touch, feel, taste and smell.

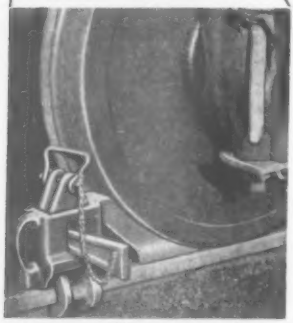
"The most tragic thing for a blind person is," he continued, "he cannot compete with persons who have eyesight. But even more tragic is the lack of appreciation which most people who have two good eyes have for these precious instruments—or the careless way in which they use their eyes."

Campbell said he cringes every



YOU CAN TRUST A CARLOAD TO THE

M & M RAIL CLAMP



It will not slip

No matter how heavy the car, the M & M Rail Clamp will hold it in immovable position, thus reducing danger of costly derailments and injuries to employees.

The M & M Rail Clamp is strong in construction, simple to use. Body is electric furnace steel casting; lugs and wedges are highest grade drop forgings. Wedge is attached with strong steel chain to clamp. Sturdy handle makes carrying easier. No blocks, ties or shims necessary — saves time in moving up.

Order an M & M Clamp and see for yourself how dependably it performs. **Immediate Delivery.**

SAFETY FIRST SUPPLY COMPANY
425 Magee St.
Pittsburgh 19, Pa.

TOUGH NEW WORK GLOVE with a **TOUGH NEW COATING**

SILVERTEX

These toughies will save you money, keep all hands cooler. Silvery coating reflects moderate heat radiation, resists cuts, snags, abrasion, and chemicals, won't crack or peel. Curved finger design, swing thumb, all standard styles.
Write for name of your distributor.

THE SURETY RUBBER CO. 100 Hall Avenue, Carrollton, Ohio, Dept. S
IN CANADA: Safety Supply Company, Toronto, Ontario

time he sees little children at play throwing sand at each other. He can't see how sane, sensible men, doing grinding or other work requiring protection for their eyes, can go calmly about their work with their safety goggles hanging about two feet away from their eyes—on a hook! Or—hanging around their necks.

The speaker explained that he was born with bilateral congenital cataracts. He wondered, early in life, why other folks could identify someone coming across the street before he could—until he learned the meaning of being blind. To keep his spirits up, his mother first explained it to him by feeling out his five fingers. Then, she told him that these represented the five senses which other persons had, and that he had only one missing —sight. But he had four which still would serve him well.

When he first gained his sight, he said, it was a terrific shock to his nervous system. He couldn't believe his eyes! His eyesight definitely increased his taste and appetite. Before that, eating was "something you had to do."

"I waited 18 years to see my father and mother," he concluded, "and it's hard to comprehend how thoughtless persons today, through carelessness, take chances on throwing away this precious eyesight—this most vital part of being alive."

Floor Resistance

—From page 66

all were resistant to beef tallow. Their resistance to dilute acids and alkalies varied from good to poor.

In general, the enamel-print felt-base floorings were damaged by alkaline cleaners, dilute acids, and kerosene. The mastic (bituminous) felt-backed floor coverings provided poor resistance to kerosene and were slightly softened by beef tallow. A proprietary floor covering having a resin-composition wearing surface showed fair to good resistance to the various oils and reagents with the exceptions of kerosene and dilute acids. A cork-composition flooring gave fair to good resistance for the various oils and reagents with the exception of sodium hydroxide.

From an over-all viewpoint, the vinyl plastics tested possessed the best properties for use in locations likely to be subjected to frequent exposure to grease, oils, and alkalies. However, at least one of the vinyl plastic samples showed a poor resistance to five of the 10 reagents, and it is questionable if vinyl plastic floor coverings can be satisfactorily installed on concrete subfloors which are in direct contact with the ground unless the concrete floor has been thoroughly membrane waterproofed. Asphalt tile, on the other hand, can be successfully laid on a concrete floor which is subject to damp conditions.

None of the reagents was highly destructive to all of the samples. At least two of the materials showed excellent resistance to each reagent. Although materials of a given type tended to be resistant to the same reagents, the differences between the resistance of individual samples of a given material were large enough to indicate the desirability of testing samples of floor coverings where severe conditions are anticipated.

You Can't Fall

It is a Life Saver

IT LOCKS — IT HOLDS

SAFETY DEVICE FOR LADDERS

Prevents Injuries by Falling

EASY TO INSTALL

Fastens to Rung, Peg, Pole or Frame

SIMPLE TO OPERATE

Men Can Climb—No Instruction

SAFETY SPECIFICATIONS

High Safety Factor—
Will Not Rust or Corrode

Write for Folder

Safety Tower Ladder Co.

P.O. BOX 1052 BURBANK, CAL.

STOCK EMBLEMS

JB47 — No Accident Awards

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JB47 — JB48 . . . Gold plated, pin and safety catch, any year date.
75¢ ea. (plus Fed. Tax)

1933 SERIES — 1¼" dia. hard glazed enamel, heavily gold plated pin and safety lock catch, $10.50 doz. (plus Fed. tax).

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Stanzoils

Fully protected by the *right* glove for the job, your workers work better and faster. It pays in higher production and profits. You lose money trying to fit one or two kinds of gloves to every job in your plant. PIONEER'S new Stanzoil catalog shows you how to buy the *right* glove for each operation.

N-71 heavyweight all-neoprene, 18" length. For hand and arm protection.

Unbiased advice — Stanzoils include all kinds of liquidtight gloves: all-neoprene, neoprene and vinyl-coated, 32 styles, weights, sizes. Make your glove dollars pay a dividend — write today for this Stanzoil catalog!

Industrial Products Division

The PIONEER Rubber Co.
637 Tiffin Road, Willard, Ohio

STANZOIL

Over 30 Years

COTTERMAN
WELDED STEEL SAFETY LADDERS
For Filing Rooms—Stock Rooms—Vaults

SAFE
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STRONG
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EASY TO MOVE
•
EASY TO CLIMB
•
NON-SKID STEPS

54"—6 Step

Mounted on Swivel Brake Casters which allow the ladder to be rolled freely when no one is on it. When you step on the ladder the rubber cushioned legs rest on the floor and prevent rolling.

Made in 7 heights:—18" 2 Step, 27" 3 Step, 36" 4 Step, 45" 5 Step, 54" 6 Step, 63" 7 Step, 72" 8 Step.

All are made in either 19½" or 25½" width.

Send for Circular No. 51-N and prices on these ladders and our full line of Wood Rolling Ladders.

Manufactured by
I. D. COTTERMAN
4535 N. Ravenswood Ave. Chicago 40, Ill.

For Safety
Guardi-Ann Hat
U.S. PATENT NO. 2,536,974

Combines utmost protection and style. Exclusive patented features found in no other hat.

Write for Free Sample or Order Direct from us

$15.00 dz.

CHIC MAID HAT MFG. CO., Inc.
630 HIGH STREET
BUFFALO 11, N. Y.

Personals

—From page 87

HUGO L. JOHNSON has been named safety manager for Pullman-Standard Car Manufacturing Company, succeeding Paul J. Brand who retired March 31 after more than 30 years of heading up the company's safety program.

Mr. Johnson, a graduate mechanical engineer of Purdue University in 1932, has been employed by Pullman-Standard in various executive positions since joining the company in 1935. A resident of Chicago, he will have charge of the safety program in the company's seven plants.

Mr. Brand started in safety work with Illinois Steel Company as safety inspector in 1910. Subsequently he was with American Car and Foundry Company and during World War I served with the Emergency Fleet Corp. He went to Pullman Company in 1922 and Pullman-Standard in 1925. During his career in safety work he has been active in the Power Press, Wood Products, Automotive & Machine Shop and Metals Sections of the National Safety Council.

JERRY E. MOORE, vice-president in charge of engineering for Corporate Service, Inc., Detroit, Mich., has been named a director of that organization. Mr. Moore is a past general chairman of the Automotive and Machine Shop Section, National Safety Council, and has served on many state and national accident control committees.

Gidel Joins NSC Staff

ROBERT D. GIDEL has joined the Industrial Department, National Safety Council, as staff representative of the Metals Section, replacing WILLIAM N. DAVIS, who resigned to become associated with the American Foundrymen's Society as safety director.

Mr. Gidel comes to the Council from the Hartford Accident Indemnity Company's Chicago office, where he was supervising engineer in charge of risks and the training of other engineers.

He is a graduate of Washington University, St. Louis, Mo., and holds a B. S. degree in Industrial Engineering.

Meyer Rejoins Staff

ROBERT L. MEYER of the Council staff, who has been on active duty with the Army since December 1950, has returned to the Council's Public Information Department. Mr. Meyer served as executive officer in a regimental headquarters company of 28th Infantry Division for almost a year before he was made company commander of a quartermaster service company. While stationed in Camp Atterbury, Indiana, he was able to renew acquaintance with Major George Harris, whom many will remember as a member of the Council's Traffic Department.

Formerly editor of the Congress Transactions and associate editor of the NATIONAL SAFETY NEWS and *Farm Safety Review*, Mr. Meyer will leave the Editorial Division to become a member of the News Division and devote his full time to developing accident prevention material for trade journals.

Ankle Action Suction Grip, Always Flat
MAKES
Johnson Crutch Tips
the Choice of Thousands

You can buy them in most orthopedic hospitals and drug stores or order direct.

65c a pair, postpaid
A DANDY CANE TIP.

Manufactured of high grade flexible rubber on the same principle as our popular ladder shoes which are used in all industries and a common sight on ladders of workmen in every city and town.

Safely yours,

JOHNSON LADDER SHOE CO. EAU CLAIRE WIS

F. M. METCALFE

FREDERICK M. METCALFE, formerly superintendent of safety for the Northern Pacific Railway, died May 4, at the Northern Pacific Hospital, St. Paul.

Mr. Metcalfe retired April 1, 1940, after 47 years' service with the Northern Pacific and almost fifty years of railroading. On the day of his retirement, Mr. Metcalfe completed exactly 25 years of safety promotion work for the Northern Pacific.

Mr. Metcalfe was born in Broughton, Lancashire, England, and migrated to Canada at the age of 8. At 21 he came to St. Paul and became railroad reporter for the *St. Paul Dispatch*. He was assigned to interview John M. Egan, president of the Chicago, St. Paul & Kansas City Railroad, now the Chicago Great Western. Egan remembered him as the lad who delivered his daily paper in Winnipeg while he was general superintendent of the Canadian Pacific. He immediately hired him as his traveling secretary.

Since 1893 Mr. Metcalfe filled various responsible positions in the Northern Pacific's Operating Department.

Mr. Metcalfe was past Chairman of the Railroad Section, National Safety Council.

Mr. Metcalfe is survived by his widow who lives in St. Paul, and one son, Fred M. Metcalfe, Jr., of High Point, N. C.

Calendar Contest Winners for April

First prize in the National Safety Council's Safety Calendar Contest goes this month to R T. Gidley of Dallas, Texas. The theme in this contest was expect the unexpected. Mr. Gidley's line was adjudged best of all those submitted. It was:

A late freight proved this dope incorrect.

Second prize went to Mrs. A. B. Poole of Corvallis, Ore., for this line:

Two "sleepers." I guess, did connect.

Third prize was awarded to Mrs. W. H. Patsel of Collegedale, Tenn., for the following line:

Loco-motives must be double checked!

Thirty $5 awards were issued to:

Mrs. M. H. Keller, Minneapolis, Minn.
Linden Buck, Arcade, N. Y.
Annis Ridings, Guntown, Miss.
Mrs. J. B. Christopher, Pacific Grove, Calif.
Mrs. Arthur M. Skibbe, Laurel, Del.
Mrs. Agnes Wissler, Davenport, Iowa.
Harry Bochnicek, Alpha Portland Cement Co., St. Louis, Mo.
Ethel M. Barbeau, Behr-Manning Corp., Watervliet, N. Y.
Miss Ladie Will Ramsey, Fairburn, Ga.
Mrs. John A. Witmer, Dallas, Tex.
P. Carson, Eudora, Kan.
Mrs. Alice Nadine Morrison, Seattle, Wash.
Nettie F. Hall, North Wilkesboro, N. C.
Mrs. S. C. Oetting, Minneapolis, Minn.
A. L. Jordan, Tulsa, Okla.
Mrs. P. C. Hauser, Cascade Locks, Ore.
Mrs. A. S. Johannesson, Brookline, Mass.
R. A. Nipe, Consumers Power Co., Kalamazoo, Mich.
Mrs. W. N. Sanders, Bessemer, Ala.
Mrs. Orpha R. Rhodes, Berkeley, Calif.
Mrs. Lee Schollaert, Phoenix, Ariz.
Allan A. Owen, New York, N. Y.
Mary Jean Donley, Hebron, Ind.
C. W. Whitman, Spokane, Wash.
Mrs. Rulon Hicks, Salt Lake City, Utah.
Mrs. William L. Ryan, Mt. Alton, Pa.
Mrs. Elsie McFarland, Austin, Tex.
Marion E. Kayute, Duluth, Minn.
Edith Rowzee, Silver Spring, Md.
Ruth M. Seigel, Wheat Ridge, Colo.

Safety and Service Emblems

Fewer accidents mean more manpower. Safety Emblems for various lengths of "no lost time" service instill the competitive spirit necessary for employee cooperation.

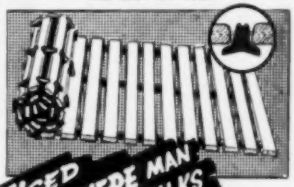
Service Award Emblems for 1, 3, 5, 10, 25 and 50 years of continued employment increase loyalty and reduce labor turn-over.

Easily seen and readily recognized emblems such as those illustrated above are paying big dividends in many large plants. Also Identification Badges, Plaques, Athletic Medals, Trophies, etc.

Write for new catalog!

METAL ARTS CO., Inc.
Dept. 10, Rochester 21, N. Y.

ROLL IT UP
SPRINGBOARD
RUBBER CUSHIONED
FLOOR MAT
"THE BEST BY TEST"



USED ANYWHERE MAN STANDS OR WALKS

80¢ PER SQ. FT. IN STANDARD SIZES

Special Lengths and Widths made to order

PREFERRED BY
- INDUSTRIES
- MEAT PLANTS
- HOSPITALS
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- CAFES
- FOOD STORES
- SCHOOLS

ALWAYS DRY — EVEN ON WET FLOORS!

Southern MANUFACTURING COMPANY
1814 DeSIARD ST. — MONROE, LA.

INDIVIDUAL
CUTTING OIL SANITATION
FOR YOUR PLANT!

Here's how to prevent costly coolant spoilage and eliminate foul odors: Ask your DOLGE service man to take samples of your coolant for *free* bacteriological and chemical analysis. A complete laboratory report will show the correct coolant handling method for *your particular operation.*

Only if tests warant it will a DOLGE STERIDOL GERMICIDE be recommended — a "tailor-made" preparation to meet *your exact needs.* Used as directed it will not irritate the skin or corrode metals. The cost?—Far less than a cent per gallon of coolant!

Write for Booklet "Cutting Oil Sanitation."

STERIDOL

Dependable
DOLGE
WESTPORT, CONNECTICUT

Lieutenant
Stanley T. Adams
Medal of Honor

ONE BITING-COLD FEBRUARY NIGHT, Lieutenant Adams was on a bitterly contested hill near Sesim-ni, Korea. Out of the dark earth the silhouettes of some 150 Communist troops rose up against the skyline. Ordering fixed bayonets, the lieutenant, with only 13 men, leaped up and charged furiously against the overwhelming odds. He was knocked down by a bullet. At least three hand grenades actually bounced off his body before exploding nearby. But when Adams and his squad were through, there were only 50 Communists left on the hill—and they were dead.

"Nobody likes to kill," says Stanley Adams. "Nobody likes war. But today the surest way to invite a war is to be weak. You and I know that twice in the last ten years Americans have let their guard down. And the Philippine and Korean graveyards are filled with men who paid the price for it.

"Please don't make that tragic mistake again. Remember that in the world today, *peace is only for the strong*. Help make your country and your armed services stronger still—by buying more . . . and more . . . and more U. S. Defense Bonds. Put *your* bond-power behind *our* fire-power, *now*—and together we'll keep America at peace!"

* * *

Remember that when you're buying bonds for national defense, you're also building a personal reserve of cash savings. Remember, too, that if you don't save *regularly*, you generally don't save at all. So sign up today in the Payroll Savings Plan where you work, or the Bond-A-Month Plan where you bank. For your country's security, and your own, buy U. S. Defense Bonds now!

Peace is for the strong... Buy U. S. Defense Bonds now!

The U. S. Government does not pay for this advertisement. It is donated by this publication in cooperation with the Advertising Council and the Magazine Publishers of America.

New safety equipment for industry

Further information on these new products and equipment may be obtained by writing direct to the manufacturer. It will help in identifying the product to mention this announcement.

Safety Relief Valve

Intended for use on hot water space heating boilers, tanks, and heaters, the Type F-51, manufactured by A. W. Cash Valve Manufacturing Corp., Decatur, Ill., is available in pressure settings from 30 to 125 pounds, with corresponding Btu ratings at various pressure settings.

The valve was developed to conform with the recommendations of the National Board and ASME wherein safety relief valves should be sized according to the Btu generating capacity of the boiler. With this

valve it is a simple matter to install a valve which has a greater relieving capacity in Btu's per hour than the particular boiler can generate. It has sufficient capacity to relieve pressure both due to thermal expansion of water, as well as steam, which is caused by failure of the firing device to shut off. It is an all-bronze valve, incorporating an exceptionally high lift design, stainless steel spring and silicone seat disc.

Adjustable Lamp

Bretford Manufacturing, Inc., 9351A Chestnut Ave., Franklin Park, Ill., announces an adjustable machine lamp which throws a flood of light directly on working areas. The lamp is a heavy duty type designed to reduce maintenance to normal replacement of bulbs. To avoid oil damage, Textolite bearings and an oil resistant cord with supplementary Vinylite insulation are used throughout. Further protection against electrical failure is provided by not running the cord through swivels or bearings.

The heavy gauge steel reflector remains comparatively cool and will not accidentally burn the operator. A porcelain socket and special heat resistant cord insulation with the reflector conform to the requirements of the Underwriters' Laboratories. The flexible joints provide action in three planes. The operator can make friction adjustments to lock the lamp in position for production or to permit repeated movement. A convenient on-off switch is mounted on the reflector next to the adjustment knob.

Standard 40 and 60 watt bulbs or 75 watt reflector type bulbs may be used.

Respirator Hood

American Optical Co., Southbridge, Mass., announces its "flyweight" respirator hood, designed specifically for dust and paint spray protection, is now being made with a new replaceable plastic window. The hood is available with the company's

R2000 seven interchangeable cartridge and disc filter respirator.

Formerly, the window of the No. 75 respirator hood was sewed to the hood and could not be detached for replacement. Now, with the aid of snap fasteners, the window can be easily and rapidly replaced. The new replaceable window provides an unobstructed frontal field of vision in addition to adequate side vision. The hood has two drawstrings which tie under the arms, permitting a snug fit at all times. It is reinforced with leather for extra long service and fits any head due on an elastic strap sewn to the back of the hood.

Hot Line Tools

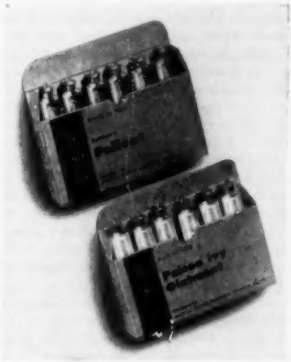
A complete line of hot line wire cutters, bolt cutters, strap shears and sheet metal hand tools is introduced by Interstate Drop Forge Co. 4051 N. 27th St., Milwaukee, Wis. Interstate recently acquired the tool line of the Helwig Manufacturing Co., St. Paul. The line is now re-appearing with heat-treated, drop-forged handles, plates and jaws. The use of drop forgings, in place of castings, provides greater strength and rigidity and reduces the over-all weight. Because they are full forged, side plates cannot twist.

According to the manufacturer, the patented gear principle of achieving leverage is responsible for simplicity in design. Replacement parts, as well as the complete line of 18 major tools, are being delivered immediately by the Interstate Co.

Insect Repellent

Medical Supply Co., 1027 W. State St., Rockford, Ill., has recently introduced Lotshaw's Pellent in the unit system of first aid to provide this insect repellent in its most efficient form to companies who have field operations.

A small amount of the repellent rubbed on the hands, neck and face keeps mosquitoes, flies, ticks, chiggers and other insects away for hours. It is an easily applied cream with a pleasant aroma. There is no stickiness, it will not stain or harm clothing, and it does not come off easily with perspiration. Each unit consists



of six ⅛-ounce tubes with safety spear caps for easy application. Among the types of field personnel who can be benefited with this protection against insects are oil field and pipe-line workers, construction crews, lumbermen, river barge crews, utility men, railway maintenance and highway crews.

Vacuum Blower

A new Vac-Blower, model VB-100 with detachable power head and a wide selection of cleaning attachments, is announced by Multi-Clean Products, Inc., St. Paul, Minn.

The new unit is an all-purpose industrial vacuum cleaner and a powerful blower. Among the cleaning jobs for which it is particularly designed are: furnaces, radiators, overhead pipes, lighting fixtures, air

New safety equipment for industry

Manufacturers are invited to send in announcements of new products, or improved special features. Only items which can be considered as "news" to our readers will be published.

conditioning equipment, electronic instruments, stock bins, storage racks, machinery, motors, generators, telephone switchboards, bare floors, carpets, upholstery and hard-to-get-at areas. The machine is powered by a heavy-duty, Universal type, 1 h.p. motor which delivers a high velocity air stream for blowing or a concentrated suction of 46" water lift for wet or dry vacuuming. Precision ball-bearings are permanently sealed in lubricant to insure free rolling and dependable performance of the high speed fan.

The machine rolls easily on four ball-bearing casters, and conveniently located handles enables one man to carry it. The 12-gallon steel tank is protected inside and out by a coating of maroon baked on industrial enamel. Unit is equipped with a 2' x 2' bag, bag support rod, 10' x 1½" flexible vacuum hose and a 22-ft., 14-gauge, 3-conductor, mark resistant rubber cord with molded rubber plug and cord strain reliever.

Standard attachment kit includes a 54" curved wand, a 12" standard floor tool, a 12" standard shoe plate attachment, and a 5" upholstery or hand tool. Numerous other attachments are available.

Power Press

Development of a new Press-Rite open back inclinable power press of 60-ton capacity is announced by Sales Service Machine Tool Co., 2363 University Ave., St. Paul 4, Minn. A feature of the new press is the heavy duty one-piece special alloy frame with built-in tie-rods of high tensile steel. The tie-rods provide extra reinforcement to the gap of the press, eliminating deflection, binding or misaligning of dies on heavy work and permitting a larger die space without loss in weight.

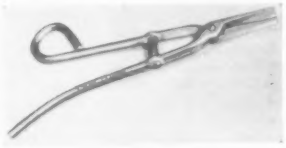
The new Model 60 Press-Rite has the Airflex clutch and brake system. Of the constricting drum type, the clutch is self-compensating for wear. Brake and clutch control cannot be engaged simultaneously—drag and excessive heating is eliminated. Clutch gripping pressure can be set for every operation and tons required, thus avoiding damage to jammed dies or to the press. The press has an extra heavy ram-slide with large and long ramways, triple lubricated with replaceable bushed hole for holding die shanks in slide, plus the original ball and socket adjusting screw, and anti-friction roller bearings in the flywheel, enclosed against dust and grit.

Available in either back-geared or flywheel types, the press is supplied with the Press-Rite Airflex Clutch mounted on the crankshaft only. Mounting the clutch on the crankshaft when supplied as a back-geared press eliminates starting and stopping of the gears for each stroke. This method reduces the wear and tear of the brake as well as on the clutch, and reduces the power consumption. The bolster area is 21 x 32 inches, and the depth of the throat is 11 inches.

Safety Tongs

A huskier and more durable pair of safety tongs has been developed by Atlas Welding Accessories Co., 707 Lewiston St., Ferndale 20, Mich., for metal working and other industries.

The new tool is constructed of drop



forged steel with long, broad nose members to provide a firm grip. Nose members are also thin at the tip, making them ideal for use in removing blanks from presses, selecting and removing single sheets from a pile, handling hot parts, lifting parts from solutions, etc. By heating, the nose may be spread or reshaped as desired for handling special shapes. The tool is also available with a guard over the spring for index finger guiding.

Goggle Cleaning

The new Allen Sani-Spray Station for cleaning and fog-proofing glasses and goggles has just been announced by Allen Optical Co., 85 Allen St., Buffalo 2, N. Y. The station is self-contained with compartments for dispenser, tissues and used tissues. No air pressure or attachments are required—just hang up and it is ready for use. One application cleans and fog-proofs goggles and glasses. The liquid is applied to the lens and polished with clean tissue paper.

Simple cabinet design provides efficient operation, with nothing to get out of adjustment. Heavy steel construction withstands daily abuses. It has a baked enamel finish. Compact size (6" x 6" x 4") requires only small wall space or may be conveniently hung on plant posts.

Gas Masks

To meet the problem of frozen gas mask valves in sub-zero temperatures and to eliminate curling of valves due to rubber solvents, Acme Protection Equipment Co., 3037 W. Lake St., Chicago, has developed a new type auxiliary valve designed for use with the company's gas masks.

Known as the Acme "Protect-A-Valve," the new product provides a secondary valve that fits over the regular exhalation valve. Thus, it serves the gas mask wearer in much the same way as a storm door protects the home. It provides protection in temperatures ranging down to 50 degrees below zero.

Car Door Opener

Penco Engineering Co., 25 California St., San Francisco, Calif., announces the Penco E-Z Way car door opener designed to quickly, easily and safely open and close freight car doors. The opener is a mechanical device made of high-strength alloy steel with a built-in "lift and holding cam." The device smoothly and powerfully exerts a 4,000 pound direct and constant pressure by a "Jack Action" stroke in the direct line with the opening and closing channel of all types of freight box car doors. The

New safety equipment for industry

Further information on these new products and equipment may be obtained by writing direct to the manufacturer. It will help in identifying the product to mention this announcement.

pressure is smooth and will not jerk door off runners.

Weighing but 34 pounds, the opener can be transported and applied by one man with efficient and effective use. Its features reduce accidents, loss of labor time, freight car and merchandise damages and meets ICC Rules of Safety. Opens and closes any door smoothly and easily without pushing or pulling and can be used at any height of the car door opening, off the ground or off the dock. The "lift and holding cam" does the job without chains. Two small chains are provided to suspend the device for one-man operation.

Floor Machines

Hild floor scrubbing and polishing machines are now made with adjustable handles. By setting a thumb-screw, the handle can be raised or lowered to the operating position that is most comfortable for tall or short operators. This new feature, now standard on all except the two smallest models, makes it even easier to operate these self-propelling machines.

With a series of easily interchangeable attachments these machines may be used to scrub, wax, polish, buff, sand, grind or steel-wool floors of any kind. Thus, a single machine may be used to recondition floors, and then keep these floors clean. They may also be used to shampoo tacked-down carpeting without removing it from the floor.

Hand Truck

Manufacture of a new hand truck, equipped with stair climbers, is announced by Magline, Inc., Pinconning, Mich. Fabricated of magnesium, the new model

weighs only 16 pounds, yet as an officially-rated load capacity of 450 pounds. In addition to removable stair climbers, the new model offers other engineering advances.

The use of mechanically joined, standard parts and assemblies provides for inexpensive parts replacement and truck repairs. This feature contributes to longer service life and lower maintenance costs. The stair climbers have been designed as standard, interchangeable units, easily replaced when required, at moderate cost.

According to the manufacturer, engineered weight distribution, in combination with aircraft-type frame construction, represents another design advancement. Greater ease of operation under full load is achieved, as well as better balance.

Load Limit Device

The Montgomery Elevator Co., Moline, Ill., announces the availability of a new load limiter for use on old or new elevators to prevent capacity overload protection. It actually weighs the load and automatically opens the operating circuits to prevent car movement should the platform load exceed the maximum limit of load as set by the cut-off switch.

A jeweled light panel in the car containing an amber "Loaded" light and a red "Overloaded" light is a part of the design. The amber light signals that capacity load has been reached and the red light signals an overload and that the car cannot be run. Once the car is started, the load limit device becomes inoperative. The device is also available for application to double duty, double speed variable voltage installations, or as an automatic by-pass device when desired.

News Items

W. G. Rainey, manager of The Diversey Corporation's Nashville sales district since 1944, has been named assistant manager of the Southern Division. J. K. Bradford is

division manager. Mr. Rainey has been with Diversey for nearly 15 years and is well known throughout the South.

* * *

Garvin A. Drew has been appointed assistant vice-president of the Scovill Manufacturing Co., Inc., with respect to the affairs of the Schrader Division. He will continue in his capacity as general sales manager. Mr. Drew also serves as a member of the Schrader Division Executive Committee and the Board of Managers.

Mr. Drew graduated from Massachusetts Institute of Technology S.B. and earned

his Master's Degree in Business Administration at New York University. After graduation from M.I.T. Mr. Drew joined the Schrader organization in 1925. Following his initial work in the Manufacturing Department at the plant in Brooklyn, he became a salesman in the Detroit area, and then moved to various posts throughout the country until he was appointed Pacific Coast manager in 1935. After serving in the latter capacity for nearly five years, he was recalled to Brooklyn to assnme the position of general sales manager in 1939.

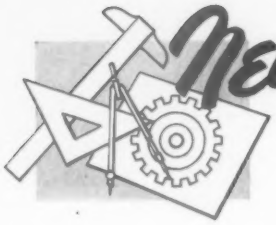
* * *

William M. Wetzel, chairman of the board and president of the Fyr-Fyter Co., manufacturers of fire extinguishers, Dayton, Ohio, announced he had acquired in Herbert A. Post, Inc., New York City, control of the outstanding capital stock of The Wooster Brass Co., manufacturers of fire fighting nozzles, hose couplings, and other brass fire fighting equipment, Wooster, Ohio. The Post Co. also owns the Fyr-Fyter Co.

The Wooster Brass Co. will henceforth operate as a division of the Fyr-Fyter Co. All officers and employees of the Wooster Co., except John Schellin, president and founder, who is retiring because of ill health, will continue. James J. Dunleavy, who has been associated with Mr. Wetzel for 25 years, and who recently has been functioning as Fyr-Fyter's New York branch manager, will replace Mr. Schellin and operate as vice president and general manager of the newly acquired Wooster Brass Division.

* * *

Watts Regulator Co., Lawrence, Mass., announces a 16 mm. sound motion picture



New safety equipment for industry

Manufacturers are invited to send in announcements of new products, or improved special features. Only items which can be considered as "news" to our readers will be published.

entitled "Explosion Danger Lurks" which requires 15 minutes showing time. The film shows actual laboratory tests in which home type hot water heating tanks were deliberately blown up to demonstrate the violence of hot water blasts. It also explains the reasons for such heater blasts and shows how the proper temperature-pressure relief valve reduces this danger.

* * *

Opening of a new Boston branch sales office and warehouse located at 1330 Centre St., Newton Center, is announced by Minnesota Mining & Manufacturing Co. W. M. Hobelsberger is office manager.

Other branch officials at the new office are J. H. Hargreaves, abrasives sales manager for industrial and refinish trades; A. S. Drew, sales manager for general line tapes; H. B. Kosanke, sales manager for retail cellophane tape; and J. E. Warner, sales supervisor for "Scotchlite" brand reflective sheeting. Electrical tape sales will continue under the direction of E. F. Gregg, with headquarters in New York. Howard Norman, also of New York, is sales manager for adhesives and hardware maintenance sales under the direction of H. G. Kelley of New York.

* * *

Oakite Products, Inc., manufacturers of specialized cleaning and allied materials, have announced the transfer of the company's general offices from 22 Thames St. to newer and larger quarters at 19 Rector St., New York 6. Acquisition of the new office space will permit a substantial increase in the facilities of the research and engineering laboratories and is designed to assist the company in providing augmented technical advisory service to industry in connection with problems encountered in civilian and defense production.

* * *

To supplement its equipment for protection of personnel and property in all industries, Mine Safety Appliances Co., Pittsburgh, now is handling a line of radiation detection instruments manufactured by Beckman Instruments, Inc., and the Arnold O. Beckman Co. Due to the increasing use of radiation in research and many industrial processes, including the atomic energy field, detection of radiation hazards is an integral part of safety and industrial hygiene programs.

The Beckman instruments now handled by Mine Safety include a portable Geiger counter, portable Beta-Gamma survey meter, AC-operated Beta-Gamma monitor, portable Gamma survey meter, pocket dosimeter and charging unit for pocket dosimeter.

* * *

Howard E. Hastedt and Willard C. Van Keuren recently became managers of Wyandotte Chemicals Chicago and Philadelphia districts.

Mr. Hastedt, new Chicago district manager, joined Wyandotte Chemicals in 1945 as a sales and service supervisor in Pittsburgh, Pa. In 1950 he was transferred to the home office staff in charge of a section of the Technical Service Department.

Mr. Van Keuren has been sales and service supervisor in Wyandotte Chemicals Boston district since 1945. He brings to Wyandotte's Philadelphia district a broad and practical experience in the application of cleaning, sanitizing and washing compounds.

* * *

Effective April 1, Hy-Test Safety Shoes became a division of its own in International Shoe Company's operation. The expansion of the safety shoe business and the increasing number of types and styles made this change necessary. Hy-Test formerly served industry through one of its retail sales divisions—Friedman-Shelby; Peters; Roberts, Johnson & Rand; or Sundial. Now industry will be served by Hy-Test representatives. All orders for safety shoes should now be directed to Hy-Test Safety Shoes Division, International Shoe Co., 1509 Washington Ave., St. Louis 3, Mo.

* * *

Appointment of Vernon L. Johnson, associated until recently with the Studebaker Corp. in South Bend, Ind., as regional sales manager, has been announced by Walter D. Schirmer, vice-president of Clark Equipment Co. in charge of Industrial Truck Division sales. Mr. Johnson has been named to head up Clark's Northeastern Region, which includes leaderships in New York, Albany, Boston, Jersey City, New Haven, Philadelphia, Wilmington, Harrisburg and Portland, Me. He will make his headquarters at 165 Broadway, New York City.

* * *

L. C. McKessen, vice-president in charge of sales of Ansul Chemical Co., Marinette, Wis., was elected president of the Fire Equipment Manufacturers' Association at its recent annual meeting in New York.

Other appointments of officers for the Association were: 1st vice-president, P. W. Eberhardt, vice-president of Walter Kidde & Co., Belleville, N. J.; 2nd vice-president, H. Lewis Stettler, Jr., executive vice-president of Elkhart Brass Mfg. Co., Elkhart, Ind.; treasurer, Paul Nurkiewicz, vice-president of Stop Fire, Inc., Brooklyn, N. Y.; commissioner, R. Kennedy Anson.

* * *

The John Hewson Co., 106 Water St., New York, N. Y., announces the opening of its Philadelphia offices in the National Bank Building, Ambler, Pa. Frederic T. Hults has been appointed as district manager for the Tri-State Area comprised of Eastern Pennsylvania, Delaware, and Southern New Jersey. Mr. Hults will be in charge of all field application work, service and sales for Takk high speed static controls, high-voltage DC insulation test instruments, industrial staticator and other high-voltage electrical instruments.

* * *

L. S. Kennedy, President, Marsh & McLennan, Inc., National Insurance Brokers, announced today the opening of an Atlanta office effective May 1 under the supervision of Vice President Frank M. Ridley, formerly with the insurance firm of Adams, Holmes and Tharpe, Inc. He will be assisted by B. C. Branch, transferred to Atlanta from the New York office. Marsh & McLennan has twenty-five offices located in principal cities in the United States and Canada, also an office in Havana, Cuba.

Safety Jugs

Agilene (Polyethylene) Safety Jugs, fabricated from polyethylene, are of rigid construction and light in weight, (one-third the weight of a comparable glass container and one-thirteenth the weight of a comparable lead container). With polyethylene offering excellent resistance against most alkalies and acids, including hydrofluoric acid, they are primarily designed for handling smaller quantities of corrosive chemicals in various industrial operations. They may be dropped or suffer rough usage without cracking or breaking.

These jugs are of unique design, which incorporates a number of features which reduce the hazards in handling of corrosive liquids. Splashing or spilling are prevented since any escape of liquid is limited to the spout. These jugs are available in standard sizes of 1½ gallon and 3½ gallon and weigh 4½ and 5¾ lbs. respectively. For further information write American Agile Corp., P. O. Box 168, Bedford, Ohio.

Trade publications

in the safety field

These trade publications will help you to keep up-to-the-minute on new products and developments in industrial health and safety equipment. They are free and will be sent by manufacturers without obligation to readers of NATIONAL SAFETY NEWS who are responsible for this work. Send in the coupon below checked for the publications you desire. Please make your requests promptly.

1. **"Eyes at Work"**: Booklet illustrating how to combine correction and protection of vision in industry by coordinating professional prescriptions with safety requirements of specific jobs. American Optical Co.

2. **Plant Protection:** Folder describes watchclock system for establishing plant protection against fire and theft, also provides a permanent record of watchman's activities throughout period of his tour. Chicago Watchclock Co.

3. **Elevating Towers:** Catalog No. 249 offers complete data on single-well and double-well models. Rigging diagrams are illustrated for practical application of this material handling equipment. Also describes components required for erection. American Tubular Elevator Co.

4. **Steel Scaffolding:** New file folder available for literature, test data and monthly bulletins of information pertinent to scaffold erection, use, safety measures, etc. Wilson-Albrecht Co., Inc.

5. **"How the Products of Clark Serve Industry"**: Booklet presents the latest in the Clark line of materials handling equipment. Illustrates axles and transmissions for trucks, buses, fork lift trucks, towing tractors, etc. Clark Equipment Co.

6. **Crane Trucks:** Bulletin No. 1613 on new type CXB and CXF locomotive type crane trucks of 6,000 lbs. capacity. Complete specifications and drawings also included. Baker Raulang Co.

7. **Sling Chains:** New Catalog illustrating ACCO Registered Sling Chains with foundry hooks and ACCO Ox-Bow Magnet Chains. Also specifications on the different types of sling chains for material handling. American Chain & Cable Co., Inc.

8. **Air-Mover:** New Bulletin No. DP-5 describes portable device for moving large volumes of air quickly where intermittent or emergency ventilation is required. Gives its use in oil refineries, chemical companies, mining operations, etc. Mine Safety Appliances Co.

9. **"Maintenance and Construction"**: 60-page manual contains a description of general rules for overhead work and excavations, safety rules for millwright and machine repair work, electrical maintenance plumbing, and rules for outside contractors. Allis-Chalmers Mfg. Co.

10. **Renewable Fuses and Automatic Oilers:** Folder describes One-Time and Plug Fuses, Fuse Pullers, "KLIPLOK" clamps for fuse clips and test clamps. Also feed oilers segregated into a handy wall chart showing various types and sizes. Trico Fuse Mfg. Co.

11. **Fire Protective Coating:** Booklet illustrating fire retardant liquid for combustible surfaces and flameproofing fabrics and materials. Albi Mfg. Co.

12. **Industrial Plugs and Receptacles:** Bulletin No. 603 describes Triploc industrial plugs and receptacles for high cycle tools and other portable electric equipment; also for use with detachable power lighting, remote control, communication, etc. The Pyle National Co.

13. **"Macwhyte Safe-Lock Wire Rope Assemblies"**: Industrial Catalog No. 5201 gives detailed specifications on assemblies for operating controls, parts of machinery and equipment, as well as slings and hoists. Macwhyte Co.

14. **"Electric Air Heaters"**: Folder on portable built-in electric air heaters for industry and business. Convection blower, duct and radiant types are illustrated, along with suitable automatic controls. Edwin L. Weigland Co.

15. **"Magnetic Tools"**: Catalog M-30 presents illustrations and specifications on hand-operated permanent-magnet tools for handling, salvaging, detecting, extracting and other features of metal conservation. Multifinish Mfg. Co.

16. **"Microtrip Controls"**: A new catalog on electric clutch controls for power machines. Illustrations feature various uses and applications, also accessories. Micro Switch Co.

17. **Industrial Gloves:** Catalog No. 22 shows a complete line of various types of gloves and mittens for men and women. Also featured are aprons, leggings, shows protectors suits—over 1,000 items in all. Olympic Glove Co. Inc.

18. **"Ace Pallet Rollers"**: Bulletin illustrating stevedore, reefer and swivel pallet rollers complete with capacity specifications, and weight. Frank L. Robinson Co.

19. **Mobile Electrifications:** A pamphlet illustrating a new insulated trolley busway for traveling cranes and monorails. Adaptable to all types of mobile electrification system throughout industry. Benbow Mfg. Co.

20. **"Work Gloves"**: Catalog No. 52 illustrates leather, leather palm, canton flannel and jersey industrial work gloves. Also includes chart from which to select the proper glove for the job. Richmond Glove Corp.

21. **Stik-Quik Labels:** A new 50-page catalog of self-sticking industrial products which includes wire markers, pipe markers, safety signs, "Scotchlite" reflective signs, masks and stencils, and printed roll tape. W. H. Brady Co.

NATIONAL SAFETY NEWS JUNE, 1952

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Advertisers' Index

A
Alan Wood Steel Co. 81
American Chain & Cable Co., Inc. ..52-53
American Hoist & Derrick Co. 93
American Industrial Safety Equip. Co. 107
American Optical Co. ..... B.C.
American Tel. & Tel. Co. 1
Ampco Metal, Inc. 8
Ansul Chemical Co. 6-7-107
Armour & Co. & Subsidiaries 67

B
Baker-Roos, Inc. 88
Bashlin, W. M., Co. 95
Bausch & Lomb Optical Co. 4
Blaw-Knox Co. 91
Bradley Washfountain Co. 105
Brady, W. H., Co. 113
Buhrke, R. H., Co. 89
Bullard, E. D., Co. 64

C
Cambridge Rubber Co. 71
Cetox Products Co. 82
Chesebrough Mfg. Co., Cons. 65
Chic Maid Hat Mfg. Co., Inc. 116
Chicago Eye Shield Co. ..... I.B.C.
Columbus-McKinnon Chain Corp. 79
Coppus Engineering Co. 5
Cotterman, I. D. 116
C-O-Two Fire Equip. Co. 69
Cover, H. S. 98

D
Davenport, A. C., & Sons, Inc. 91
Davis Emergency Equip. Co. 89
Dayton Safety Ladder Co. 111
Diversey Corp. 78
Dockson Corp. 85
Dolge, C. B., Co. 117
DuPont, E. I., de Nemours & Co., Inc. .. 85

E
Ellwood Safety Appliance Co. 97
Employers Mutual of Wausau 87

F
Finnell Systems, Inc. 45
Frost Paint & Oil Co. 112

G
General Bandages, Inc. 111
Gilbert & Barker Mfg. Co. 94
Grinnell Co. 17
Gro-Cord Rubber Co. 47

H
Halperin, A. E., Co., Inc. 113
Harrington & King Perforating Co. ... 96
Hild Floor Machine Co. 92
Hood Rubber Co. 65
Hynson, Wescott & Dunning, Inc. 57
Hy-Test Div., International Shoe Co. .. 18

I
I.D.U. Products Co. 109
Industrial Gloves Co. 106
Industrial Products Co. 108
Inland Steel Co. 14

J
Johnson Ladder Shoe Co. 116

K
Kidde, Walter & Co., Inc. 51

L
Legge, Walter G., Co., Inc. 55
Lehigh Safety Shoe Co. 3
Littell, F. J., Machine Co. 108

M
McDonald, B. F., Co. 76
Medical Supply Co. 61
Metal Arts Co., Inc. 117
Milburn Company 80
Mine Safety Appliances Co. ..... I.F.C.
Minnesota Mng. & Mfg. Co. 84

N
National Safety Council ..100-101-102-103

O
Oakite Products, Inc. 124
Onox, Inc. 104

P
Packwood, G. H., Mfg. Co. 63
Patent Scaffolding Co., Inc. 105
Pennsylvania Optical Co. 15
Pioneer Rubber Co. 115
Pittsburgh Plate Glass Co. 99
Prairie State Products 88
Pyrene Mfg. Co. 77

R
Randles Mfg. Co. 124
Rockwood Sprinkler Co. 59
Rose Mfg. Co. 95

S
Safety Box Toe Co. 12-13
Safety First Supply Co. 114
Safety Tower Ladder Co. 115
Scott Aviation Corp. 46
Sellstrom Mfg. Co. 93
Silicone Paper Co. of America 43
Smith, A. O., Corp. 86
Southern Mfg. Co. 117
Standard Industrial Products Co. 109
Standard Safety Equipment Co. 96-98
Standard Signs, Inc. 124
Stonehouse Signs, Inc. 73
Surety Rubber Co. 114

U
U. S. Safety Service Co. 49
U. S. Treasury 75-118

V
Vonnegut Hardware Co. 90

W
Watchemoket Optical Co. 16
West Disinfecting Co. 11
Wheeler Protective Apparel, Inc. 110
Wilkins Co., Inc. 83
Williams Jewelry & Mfg. Co. 115
Willson Products, Inc. 9-10

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